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ABSTRACT

The Salt Lake Community College (SLCC) (Utah) implemented a concurrent enrollment program in the 1989-90 academic year that provides high school students with an opportunity to enroll in college-level courses and receive college and high school credit. This study evaluated enrollment data for students who had completed concurrent enrollment courses and graduated from SLCC to determine which courses counted and which did not count toward graduation. Those data were then used to calculate the extent of cost savings to students who successfully completed concurrent enrollment courses through SLCC and savings, if any, to the State of Utah. Three general conclusions resulted from this study: First, students who participated in SLCC's concurrent enrollment program saved money. Second, students also experienced time savings through participation in the college's concurrent enrollment program. However, even with the benefits of concurrent enrollment, participating students need to enroll in more concurrent enrollment courses so that cost and time savings may be increased. Third, the State of Utah's concurrent enrollment program as implemented at SLCC provided potential cost savings to the State of Utah. (Contains 17 tables, 8 figures, 128 references, and 7 appendices. (KP)

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AN ANALYSIS OF THE COSTS AND SAVINGS OF THE CONCURRENT ENROLLMENT PROGRAM AT SALT LAKE COMMUNITY COLLEGE

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A dissertation submitted to the faculty of

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in partial fulfillment of the requirements for the degree of

Doctor of Education

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ABSTRACT

AN ANALYSIS OF THE COSTS AND SAVINGS
OF THE CONCURRENT ENROLLMENT PROGRAM
AT SALT LAKE COMMUNITY COLLEGE

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Salt Lake Community College implemented a concurrent enrollment program in the 1989-90 academic year which provides high school students with an opportunity to enroll in college-level courses and receive college and high school credit. Students enrolled in concurrent enrollment courses are counted in the Weighted Pupil Unit formula used to fund public education. These students are also counted in an Annualized Full-time Equivalent formula used to fund the concurrent enrollment program.

When high school students enroll in concurrent enrollment courses they have an opportunity to save money and time as they pursue their college goals.

If concurrent enrollment course fulfill high school and college requirements students have an opportunity to experience cost and time savings.

As concurrent enrollment courses count toward a student's college requirements for graduation, the State of Utah also has an opportunity to save state funding. However, if concurrent enrollment courses do not count toward a college degree, the State of Utah in a sense pays twice for the students higher education experience.

This study included graduates from Salt Lake Community College's 1997-98, 1998-99 and 1999-2000 graduating classes who had completed at least one concurrent enrollment course for the purpose of determining time and potential cost savings to participating students and cost savings to the State of Utah. Approximately 60 percent of students included in the study completed about one quarter of college-level courses and saved up to $600 in tuition. However, a small percentage of students completed one year of college prior to high school graduation and received tuition savings of over $2,200.

The State of Utah receives fiscal benefits if concurrent enrollment courses count toward college graduation. These courses are general education courses and courses that fill a major course or elective requirement. In this study more than 80 percent of all concurrent enrollment courses included in the study counted toward graduation and the State of Utah received savings of over $138,000.

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CHAPTER ONE

INTRODUCTION

I have a plan which is at the same time unique and comprehensible which I am persuaded will revolutionize University study in our country.

— William Rainey Harper (Goodspeed, 1928, pp. 110-111)

The community college seeks to become a center of learning for the entire community, with or without the restrictions that surround formal course work in traditional institutions of higher education. It gears its programs and services to the needs and wishes of the people it serves.

— President's Commission on Higher Education

(PCHE, 1947, vol. 1, pp 69-70)

Community colleges have become a major component of higher education in the United States as they strive to serve the citizens in their communities. Partnerships, compacts and collaboration have played an

important role in the service provided by community colleges. Fostering relationships and partnerships with high schools is one area where colleges may have an extended positive impact in their communities.

Relationships between high schools and higher education go back more than two centuries. However, the closer collaboration required for successful partnerships is a relatively recent occurrence (Greenberg, 1992). The first collaborative partnership was created when Joliet High School affiliated with the University of Chicago in the late 1890s and the early 1900s under the direction of William Rainey Harper.

A majority of two-year colleges in the United States are involved in collaborative programs with local secondary schools according to a study by the American Association of Community and Junior Colleges (Parnell, 1985). These high school - college partnership models include concurrent enrollment models (also called dual or joint credit models); enrichment, compensatory, and motivational models; academic alliances and teacher-to-teacher models; pre-service teacher education models; mentoring/tutoring models; and school improvement and restructuring efforts (Greenberg, 1992). Shared faculty and/or facilities and advanced placement programs are also included (Van Patten & Dennison, 1986).

Concurrent Enrollment

Of these partnership models and collaborative programs, concurrent enrollment programs are the most common form of collaboration between

secondary and higher education (Greenberg, 1992). These concurrent enrollment programs are accelerated learning programs designed to provide an opportunity for high school students to engage in college-level courses usually for simultaneous high school and college credit.

When initially developed in the early 1970s, concurrent enrollment programs were intended for gifted students. Now concurrent enrollment programs serve a variety of students including gifted students (Gaines & Wilbur, 1985; Wilbur & Chapman, 1978), students who have shown above average academic ability (Crews & Pierce, 1986), students with vocational or technical interests (Littleton Community Network, 1996), students who desire to transfer to or attend four-year colleges and universities (Wolf & Geiger, 1986) and at-risk students (Greenberg, 1988).

Syracuse University's Project Advance in the early 1970s was the first configuration of a secondary and post-secondary dual credit partnership and targeted gifted students (Gaines & Wilbur, 1985; Wilbur & Chapman, 1978). Concurrent enrollment programs intended for above average students include DeKalb Community College (Crews and Pierce, 1986), University of Dayton, Ohio State University and the University of Utah (Geiger & Wolf, 1986).

Other studies identify concurrent enrollment programs for students who are average or below average. Greenberg (1988) identifies three programs located in New York City which address the needs of low- and moderate-achieving students, and provide students with opportunities to succeed in college courses while high school seniors. These three programs are City-As-School,

Kingsborough Community College's College Now, and Middle College High School.

Not only are concurrent enrollment opportunities available for gifted, average and at-risk high school students, vocational/technical courses are also offered as concurrent enrollment courses. The Arapahoe-Douglas Area Vocational School, a division of Arapahoe Community College, offers dual credit programs which allow high school students to receive college credit for vocational/technical courses.

These partnerships and concurrent enrollment models indicate that students of many different levels of ability, interest and circumstance have opportunities to participate in concurrent enrollment programs. Though the targeted student population of concurrent enrollment programs vary, each concurrent enrollment program has its similarities.

Concurrent enrollment programs begin with a primary set of objectives which were initially driven by educational leaders who recognized the need for high schools and postsecondary institutions to partner together in meaningful ways. In the 1880's, the Massachusetts Teachers' Association passed two resolutions that led to partnerships between the high schools and postsecondary institutions. The first of these resolutions stated that the lack of cooperation was evil, and the second stated that more cooperation between the high schools and postsecondary institutions would be a positive good. Between 1892 and 1918, the National Education Association convened a series of meetings to formulate plans for cooperation between high schools and higher education institutions. In

effect, the outcome of these meetings established priority for college preparation as a primary function of the high school curriculum. A combination of this priority and the Sputnik crisis in 1957 provided the momentum for the high school and higher education partnerships (Fincher-Ford, 1997).

The objectives of the high school and higher education partnerships are to shorten the time required for high school students to complete an undergraduate degree, smooth the transition from high school to college, and eliminate the duplication of courses taken in high school and in college (Fincher-Ford, 1997). Other objectives include sharpening students' general academic preparedness for college, expanding the academic options for college-bound students, and enhancing the college-credit options for technical education students. Concurrent enrollment programs also enable high schools to allow access to courses which they are not able to provide (Gray, 1982).

In pursuit of these objectives, concurrent enrollment programs consistently create opportunities and real incentives for high school students to work hard academically, explore their educational interests before full-time college study, review various career options, and understand what is required of them to be successful in a career or profession (Fincher-Ford, 1997).

An example of a comprehensive program intended to include objectives similar to those described above is found in the State of Minnesota. Since the 1980's, the State of Minnesota has offered a comprehensive school choice program which includes an option called the Postsecondary option. This option is intended to enable high school juniors and seniors to take courses at public or

private higher education institutions for both high school and future higher education credit. During the 1994-95 school year, over 6,100 students participated in the Postsecondary option of Minnesota's school choice program. The State of Minnesota was the first state to enact statewide open enrollment. Subsequently, statewide open enrollment has been enacted in a number of states including Utah. Minnesota's Postsecondary option is similar to Utah's concurrent enrollment program (School choice and urban school reform). A common element to both concurrent enrollment programs is the intent to provide an accelerated learning experience which allows students to progress more quickly through their higher education experience.

Other studies of concurrent enrollment programs

Additional information is provided relating to concurrent enrollment programs through other dissertations. Specifics of some of the studies are presented here.

Harkins (1998) identified three types of concurrent enrollment programs in terms of where students attend classes and whether or not college professors teach the classes. She described the three types as follows: In Type I concurrent enrollment programs students go to the college campus to take classes taught by college professors. In Type II programs college professors go to the high schools to teach the classes. In Type III concurrent enrollment programs college courses are taught at the high schools by qualified high school teachers.

Harkins stated that although information about the general topic of school/college programs is accessible, little collective information about Type III programs, specifically, exists. Harkins provided no information about accelerated learning program benefits or cost savings. Her findings are consistent with other literature reviewed. Salt Lake Community College's concurrent enrollment program is a Type III program.

Hirpa (1993) investigated the relationship of the Utah State University concurrent enrollment program to the achievement (GPA), recruitment, and retention of program participants after attending Utah State University. This study identified three administrative approaches to the management of concurrent enrollment programs. Level One involved high school teachers who taught and graded concurrent enrollment courses. Level Two required high school teachers to teach the concurrent enrollment courses, but University professors prepared exams and graded papers. In Level Three University professors taught the concurrent enrollment courses, prepared and graded exams, and graded papers.

According to Hirpa's definitions of Level One, Level Two and Level Three, Salt Lake Community College's concurrent enrollment program falls into the Level One category where high school faculty taught and graded the concurrent enrollment courses.

Wright (1996) published a descriptive summary of Utah's early high school graduates with the aim of determining the extent to which the program prepares participating students with an adequate foundation for future endeavors when compared to traditional graduates. The following results were provided: (a)

Students of all achievement levels participate in the early graduation option. Average achieving students represent the highest percentage of participants. (b) Early graduates earn fewer credits than do traditional graduates. Credits earned in basic-level courses are virtually equal, but traditional graduates earn more credits in middle- and advanced-level courses. (c) Early graduates earn fewer credits in subjects classified as "new Basics" in A Nation At Risk than do traditional students.

Ungricht (1997) completed a study which identified the relationship between learning strategies and demographic and educational performance variables, and explored patterns of learning of distinct clusters that existed in the sample of high school students taking concurrent enrollment. The multivariate technique of cluster analysis identified five distinct clusters. The Total Physical Response Learner is interested in meaningful and in-depth learning. The Matrix Learner learns best in group settings. The Strategic Learner likes to be given a direction then follows it strictly. The Sequential Learner is able to organize his or her learning and focuses on details. The Creative Learner uses higher order thinking skills to approach learning.

Donahue (1993) discussed concurrent enrollment as a strategy used by educational entities to attempt to eliminate barriers between educational levels and provide for a seamless education. His study suggested that performance of concurrently enrolled high school students at a non-selective community college is similar to the native population. The data indicated that there is a strong relationship between high school GPA prior to concurrent enrollment and college

GPA. His results also suggested that there is little relationship between achievement test scores and overall college GPA. Donahue suggested that concurrent enrollment students attended a non-selective community college for a number of reasons. Salt Lake Community College is considered a non-selective community college.

Crooks (1998) performed a policy study investigating state-enhanced college-level learning opportunities for secondary students. Her study included surveying State Higher Education Executive Officers and conducting case studies of Minnesota, Utah and Virginia. This study suggests that state enhanced college-level learning is delivered using three different models: (1) the College Board's Advanced Placement program, (2) dual enrollment whereby the student is taking college courses taught by college faculty, and (3) credit validation that allows certified high school instructors to teach college courses in the high schools. Using these definitions Salt Lake Community College's concurrent enrollment program is included in model three: credit validation.

McConnaha (1996) reported that students who participated in dual enrollment as a form of acceleration were highly motivated. These students possessed positive attitudes and self concepts. Students who were self-influenced in their decision to take dual enrollment courses viewed the social impacts as positive. However, students who participated in dual enrollment because of the influence of others viewed the social impact as negative.

Mullin (1997) assessed the Minnesota Postsecondary Enrollment Options Program from the perception of past participants and their parents. Former

participants and parents generally rated as positive the program's impact on students' educational development, self-confidence, preparation for postsecondary matriculation, study habits, graduation from high school, overall high school experience, relationships with peers, and relationships family members.

Kleinrock (1987) provided both a summative description of concurrent enrollment programs in the New York metropolitan area and proposals for the development of student services for these programs. His study focused on concurrent enrollment programs that allowed high school students to take college courses on the college campus with regular college students.

Concurrent Enrollment and Salt Lake Community College

Because the State of Utah desired to provide benefits similar to those found in the State of Minnesota's Postsecondary option, legislation enacted in 1988 mandated that "the Utah State Board of Education in collaboration with the Utah State Board of Regents shall implement a program of higher education courses in public schools" (Utah Code Annotated 1953, 53A-15-101, see Appendix E).

The State of Utah's legislation specified that a curriculum program and delivery system be developed to allow high school students to graduate at the conclusion of the junior year or earlier as students participate in accelerated learning programs. As part of Utah's accelerated learning approach, selected courses in general and applied technology education are made available through

the concurrent enrollment program. Successfully completing concurrent enrollment courses helps students to graduate from high school early and be better prepared for the world of work or complete selected college level courses corresponding to the first year of course work at a college or university (Utah Code Annotated 1953, 53A-15-101). These statements identify the primary purpose of Utah's accelerated learning program as providing students with an opportunity to graduate from high school early, be better prepared for the world of work, or complete selected college level courses corresponding to the first year of course work at one of the state's higher education institutions. Concurrent enrollment is a major component of Utah's accelerated learning program in secondary education.

Salt Lake Community College supports the desires of the State of Utah to provide an accelerated learning program which provides an opportunity for high school students to engage in college-level course while earning high school and college credit. Using the Utah State Board of Regents Policy and Procedure, Salt Lake Community College developed and implemented a concurrent enrollment program on July 1, 1989.

Salt Lake Community College's Concurrent Enrollment Handbook contains concurrent enrollment guidelines and defines Salt Lake Community College's concurrent enrollment program. The College's concurrent enrollment handbook was written using information from Utah State Legislation and State Board of Regents Policy and Procedures Manual. It also contains information

from the Utah State Board of Education Rules and is made available to all high schools in the Salt Lake Community College service region.

Salt Lake Community College's Concurrent Enrollment Handbook defines concurrent enrollment from the college's perspective. The definition states:

> Concurrent enrollment classes are college level classes offered to high school students for both high school and college credit. Concurrent enrollment students enroll for the class at both the high school and the college. While students earn high school credit, they also earn college credit which is recorded on a college transcript. Both vocational and general education classes may be offered. (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997, p. 1)

In this program juniors and seniors within Salt Lake Community College's service region, comprised of five school districts (Salt Lake, Murray, Granite, Jordan, and Tooele), have the opportunity to enroll in concurrent enrollment courses and simultaneously earn high school and college credit. Successful completion of these courses is intended to lead students toward to completion of an Associate of Science degree, an Associate of Arts degree, or Associate of Applied Science degree.

Since students who participate in and successfully complete concurrent enrollment courses receive both high school and college credit, they earn college credit prior to completing high school. This suggests that students completing concurrent enrollment courses should be able to complete an associates or

bachelors degree in less time than a student who takes no concurrent enrollment courses, which is one of the intents of the legislation mandating concurrent enrollment in the State of Utah.

An associates degree at Salt Lake Community College may be earned through a number of different approaches. Two of these approaches are (1) by completing all courses required for the degree at one of Salt Lake Community College's campuses or sites, or (2) by completing concurrent enrollment courses prior to high school graduation, then enrolling in regular college courses at Salt Lake Community College.

In theory, students who successfully complete concurrent enrollment courses are able to save money when compared to students who do not successfully complete concurrent enrollment courses. Also, in theory, when students successfully complete concurrent enrollment courses, the State of Utah should save money. Students and the State of Utah should save money as these courses fall into one of three categories.

The three categories of classes are 1) general education courses intended to transfer to 4-year colleges and universities, 2) major course requirements, and 3) major elective courses. Whether students intend to transfer to 4-year higher education institutions or complete vocational/technical courses prior to entering the work force, courses in these three categories fulfill the intent of the concurrent enrollment program.

As the student population continues to increase at Salt Lake Community College and at other higher education institutions in the State, the cost of

supporting higher education also continues to increase. Salt Lake Community College's concurrent enrollment program, which allows students to begin their college experience prior to graduating from high school, should decrease the amount of time required by students to earn their college degree. Completing an Associates degree at Salt Lake Community College should cost students who have completed concurrent enrollment courses less since these students pay no tuition for concurrent enrollment courses and receive credit for both high school and college courses.

As enrollment in Salt Lake Community College's concurrent enrollment program increases, the potential for cost-savings to students and the State of Utah increases. Not only did Salt Lake Community College's enrollment in regular college classes increase every year, enrollment in the college's concurrent enrollment program has increased every year since its inception. Enrollments in credit courses have nearly doubled between 1989 and 1998 with annualized full-time equivalent students increasing from 7,584 to 13,216 and annualized unduplicated headcount students increasing from 18,843 to 31,816. During the same time period concurrent enrollment course offerings increased from 110 to 538 courses and student enrollments increased from 758 to 9,493 students (see Appendix D.)

In 1999 concurrent enrollment courses were offered in 23 high schools and the Jordan Technical Center. These high schools represented Granite, Jordan, Murray, Salt Lake and Tooele school districts in Salt Lake Community College's service region, and a small number of students from the Davis School

District. The students from Davis School District participated in Salt Lake Community College's concurrent enrollment program under a "First Right of Refusal" agreement with Weber State University.

As the concurrent enrollment student population increases, greater pressure is placed on higher education institutions and the State of Utah to provide cost-effective programs. Financial benefits are available to students who participate in the concurrent enrollment program and to the State of Utah. A discussion of funding sources and financial benefits to students and to the State of Utah will help the reader to understand the financial benefit of the concurrent enrollment program.

Funding sources and financial benefits

In the State of Utah the public school system is funded using a Weighted Pupil Unit formula to determine budget amounts for public schools. To determine the budget amount given to public schools, the State Legislature calculates the cost of educating one student (Weighted Pupil Unit) based on criteria such as student need, transportation costs, and other data. Once the WPU is calculated, each school's allocation is determined by multiplying the WPU and the enrollment in that school.

According to the Salt Lake Community College budget office, colleges and universities are funded based on the number of "annualized full-time equivalent" students attending classes. An annualized full-time-equivalent student is a student or combination of students who enroll in 45 quarter hours or 30 semester

hours of college courses or concurrent enrollment courses in one academic year. For those students attending concurrent enrollment classes, the high schools continue to count the students in the Weighted Pupil Unit formula, but the colleges and universities do not include the concurrent enrollment students in calculating "annualized full-time equivalent" students.

According to the Concurrent Enrollment Director at Salt Lake Community College, high school students completing concurrent enrollment courses are included in the Weighted Pupil Unit formula and high schools receive $1,500 from the state for each "annualized full-time equivalent" student attending concurrent enrollment courses. In compliance with a contract between public education and higher education, the high school keeps $1000 and pays the college or university $500 or 1/3 of the total amount. The $500 received by the college or university is used to cover administrative and other costs of offering a concurrent enrollment program and is the only amount received for students participating in the concurrent enrollment program.

Potential cost-savings to the State

Information provided by Salt Lake Community College's budget office indicates that during the 1997-1998 academic year Salt Lake Community College received $2,800 from the State for every "annualized full-time equivalent" student taking regular college courses but received no payment directly from the State for concurrent enrollment students. Using the amounts paid to the high schools for "annualized full-time equivalent" concurrent

enrollment students and to Salt Lake Community College for "annualized full-time equivalent" students taking regular courses and performing a simple subtraction, the potential savings to the State of Utah for every "annualized full-time equivalent" concurrent enrollment student is $1,300 ($2,800 - $1,500).

These savings are generated only when concurrent enrollment courses count toward an Associate of Science, Associate of Arts or Associate of Applied Science degree. However, the savings to the State of Utah decreases if courses completed do not count toward an Associate of Applied Science, Associate of Science, Associate of Arts degree

When concurrent enrollment courses do not count toward an associates degree, the State "pays twice." The first time the State pays is for the cost of the concurrent enrollment courses completed, and the second time the State pays is for regular college courses. The high school still counts all concurrent enrollment courses successfully completed in the "annual full-time equivalent" calculation and receives the $1,500. In addition, since the student experiences no reduction in the number of regular college courses to be taken on campus, Salt Lake Community College is able to include the student's on-campus course load and receive $2,800 for each annualized full-time equivalent student taking regular college courses. Thus the additional cost to the State of Utah for every annualized full-time equivalent concurrent enrollment student whose concurrent enrollment classes do not count toward a degree is $1,500.

Until additional data is gathered and studied, the number of concurrent enrollment courses that count toward graduation and the number of concurrent

enrollment courses that do not count toward graduation is not known. Courses that count toward graduation include general education courses, major course requirements and program electives. Courses that do not fall into one of these three categories do not count toward graduation.

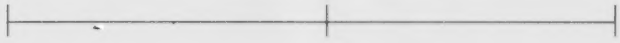
Three scenarios exist for community college students. The first scenario includes students who did not participate in the concurrent enrollment program. The cost to the State of Utah for each annualized full-time equivalent student in this category is $2,800. The second scenario includes concurrent enrollment courses that counted toward an associates degree or certificate. For each annualized full-time equivalent student these courses cost the State of Utah $1,500. The third scenario includes concurrent enrollment courses that did not count toward an associates degree. The courses in this scenario do not decrease the number of courses required for graduation. Therefore, the courses in scenario three cost the State of Utah an additional $1,500 for each annual full-time equivalent student. The total cost of these courses is $4,300 ($2,800 + $1,500) but the additional cost to the State of Utah is only $1,500.

When students do not take courses through the concurrent enrollment program but do take regular college courses, the State of Utah gives no additional concurrent enrollment funding. These regular college courses are funded at the amount of $2,800 for each annualized full-time equivalent student. No additional costs or savings to the State of Utah are generated.

The following table helps to explain the potential financial benefits available to the State of Utah.

Table 1:

Continuum of potential costs & savings to State of Utah



Additional Costs (-$1,500)	$0	Savings ($1,300)

- The break even point lies somewhere between the Costs and Savings but is not $0. It is a point on the continuum where the total additional costs and savings amounts are equal.
- If all concurrent enrollment courses count toward graduation, the State of Utah saves $1,300 per annualized full-time equivalent concurrent enrollment student. Student benefits and state savings are maximized.
- If no concurrent enrollment courses count toward graduation, each annualized full time equivalent concurrent enrollment student costs Utah an additional $1,500. Neither students nor the state receive cost-savings.
- Break even point is a point at which savings generated because concurrent enrollment courses count toward graduation is equal to additional costs generated for concurrent enrollment courses that do not count toward graduation.

The State of Utah benefits when the concurrent enrollment courses successfully completed count toward college graduation. The State of Utah saves $1,300 for each "annualized full-time equivalent" student in the concurrent enrollment program as the courses completed count toward degrees.

Because savings are determined by the number of "annual full-time-equivalent" students, the State of Utah not only supports but encourages participation in concurrent enrollment programs. Additional savings are realized as construction of new buildings is postponed.

Potential cost-savings to students

Students experience cost-savings through tuition savings as concurrent enrollment courses are successfully completed and count toward their college degree. Students who enroll in concurrent enrollment courses pay only a $20.00 admission fee to Salt Lake Community College but no tuition or other student fees. This admission fee is a one-time fee paid by all students at the time of application for admission as a matriculated student. When students attend regular college courses, normal tuition and student fees apply. Thus for every concurrent enrollment course completed, the student saves an amount equivalent to tuition and student fees the student would have to pay if attending regular college courses. Using 1999-2000 tuition rates, a student who had completed 12 concurrent enrollment credit hours would save $794 in tuition and student fees. Potential sávings to students increase as more concurrent enrollment courses that count toward graduation are successfully completed.

Student cost-savings are generated only if concurrent enrollment courses are satisfactorily completed and if the concurrent enrollment courses count toward general education requirements or as required or elective courses in the student's declared major. Courses which do not count for one reason or another

toward graduation do not shorten the student's time requirement to degree completion or generate long-term cost-savings for the student. For this reason, students desiring to participate in concurrent enrollment courses should select course thoughtfully and carefully and after guidance from an academic advisor.

Studies relating to funding of concurrent enrollment programs

The review of literature did not identify a single study dealing with funding a concurrent enrollment program or costs and savings available to concurrent enrollment students or funding entities such as the State of Utah. Since no fiscal data exist, support for the concurrent enrollment program at Salt Lake Community College and at the State level is based on assumptions, emotions or other issues, but not on fiscal data. This study provides data which suggest either continued support for the concurrent enrollment program at Salt Lake Community College or other accelerated learning alternatives should be sought which better utilize the State's resources.

The Problem

No study exists which suggests whether or not Salt Lake Community College's concurrent enrollment program saves the State of Utah money, or students who successfully complete concurrent enrollment courses save time and money.

By completing this study, data will be gathered and analyzed which will be useful in determining the benefit to the State of Utah and students from the

concurrent enrollment program at Salt Lake Community College. Information will be provided which quantifies time and cost savings to students participating in concurrent enrollment and cost savings to the State of Utah. This study will give an indication of the extent that the concurrent enrollment program provides an accelerated learning program and shortens the time required to complete an associates degree. Information about time and cost savings will be provided which relates to accelerated completion of an associates degree.

This study will provide fiscal data which to date has not existed and which will have an impact on the support of the concurrent enrollment program at the State level and at Salt Lake Community College.

Statement of Purpose

The purpose of this study is to evaluate enrollment data of students who have completed concurrent enrollment courses and graduated from Salt Lake Community College to determine which courses counted and which did not count toward graduation so that net costs or savings to the State of Utah can be calculated. This data will be used to calculate the extent of cost-savings to students attending Salt Lake Community College who successfully completed concurrent enrollment courses through Salt Lake Community College and savings, if any, to the State of Utah.

The primary issue of these calculations is the determination of courses that count toward graduation and the courses that do not count. For example, in the following three scenarios 15 annualized full-time equivalent students have

successfully completed concurrent enrollment courses. In scenario one all courses counted as a general education course, a core requirement, or an elective, the State of Utah receives the following cost savings:

Cost of concurrent enrollment courses:	$22,500 ($1,500 * 15)
Reduced SLCC tuition from courses:	$42,000 ($2,800 * 15)
Net savings to State of Utah:	$19,500 ($42,000-22,500)

In scenario two, no concurrent enrollment courses count toward graduation. In this case, since none of the concurrent enrollment courses reduced the courses required by any student's major, each student will be required to complete all courses required by the degree. The effect is that no tuition savings will be available to the State of Utah. The additional cost to the State of Utah is $22,500.

In scenario three, one-third of the concurrent enrollment courses counted toward graduation and two-thirds did not count toward graduation. The following scenario exists:

Cost of concurrent enrollment courses:	$22,500
Reduced SLCC tuition from the 5 annualized full-time equivalent students that count toward graduation.	$14,000
Additional cost to the State of Utah because concurrent enrollment courses do not count.	$28,000
Additional costs to the State of Utah:	$36,500

These scenarios show that if all courses count, the potential savings to the State of Utah are maximized. However, if none of the courses count, the costs to the State of Utah are maximized. When some concurrent enrollment courses count toward graduation but not all courses, the costs or savings could be anywhere between maximum savings and maximum costs to the State of Utah.

This study adds information to the body of knowledge in two general areas: (1) cost-savings to students who have successfully completed concurrent enrollment courses and to the State of Utah have not been calculated prior to the work done in this study, and (2) a model for calculating cost-savings students and the State of Utah is presented.

Research Questions

To accomplish the purpose, this study addresses the general research questions: 1) To what extent does the concurrent enrollment program at Salt Lake Community College generate cost-savings for students who successfully complete concurrent enrollment courses? 2) To what extent does the concurrent enrollment program at Salt Lake Community College generate cost-savings to the State of Utah? These two general questions will determine net benefit to the State of Utah and students who participate in the concurrent enrollment program.

Research design

Approach and methodology

Rossi (1994) defines cost-benefit analysis as an "Analytical procedure for determining the economic efficiency of a program, expressed as the relationship between costs and outcomes, usually measured in monetary terms" (page 442). This study considers savings of concurrent enrollment courses that count toward the completion of an associates degree, the costs of concurrent enrollment courses that do not count toward an associates degree, and the costs of obtaining a degree without taking concurrent enrollment courses.

In order to determine the costs and benefits of the concurrent enrollment program at Salt Lake Community College, an evaluation will be made of the students who graduated from Salt Lake Community College during the 1997-98, 1998-99 and 1999-2000 academic years. Courses that are either general education courses, major course requirements, or program electives fulfill the objective of the concurrent enrollment program. Courses not in one of the three categories do not provide the desired benefit to students. Concurrent enrollment courses meeting one of these criteria provide savings to the State of Utah and participating students, and courses not meeting one of these criteria decrease savings.

Data collection

Students who graduated from Salt Lake Community College in the 1997-98, 1998-99, and 1999-2000 academic years and completed at least one

concurrent enrollment courses are included in the study. Each student's concurrent enrollment courses will be extracted from the college's Student Information System and studied. Information about each student's declared major, degree earned, every concurrent enrollment course completed, and total credit hours required to complete the degree will be gathered.

Data analysis

In order to determine if the concurrent enrollment courses generate savings for the State of Utah and students, students' majors are identified; the requirements of each major are determined; then each successfully completed concurrent enrollment course is compared to the student's major course requirements, the list of electives for that major, and the general education requirements. Courses that count toward graduation and courses that do not count toward graduation are included. Every successfully completed concurrent enrollment course requires this process of evaluation. Ratios of courses that generate savings or costs will be presented.

Costs to students who enroll in concurrent enrollment courses and costs of enrolling in regular college courses will be determined. Identifying costs incurred by the State of Utah for regular college courses and concurrent enrollment courses is also required.

After determining whether specific concurrent enrollment courses generate costs or savings, costs and savings to students and the State of Utah will be calculated. Included in this process is the calculation of the break even

point which will determine the point at which the savings generated because concurrent enrollment courses fall into one of the three categories identified above is equal to the costs generated when concurrent enrollment courses are not in one of the three categories.

Cost comparisons will include the costs of a traditional student getting a degree in 2 years to the actual costs of a student completing a 2-year degree. Costs to complete an associates degree for concurrent enrollment students and traditional students will be compared. This analysis will result in projected real savings because of concurrent enrollment.

This evaluation serves two purposes. First, it identifies cost-savings to students and the State of Utah. Second, the process followed becomes a procedure which could be used to complete additional studies of cost-savings at Salt Lake Community College and at other higher education institutions in the State of Utah if they desire to use this model.

Delimitations

This study is limited to evaluating the concurrent enrollment courses completed by students who graduated in the academic years 1997-98 through 1999-2000. With the growth patterns in Salt Lake Community College's concurrent enrollment program, these years are representative of the existing concurrent enrollment program.

Since one of the primary objectives of the concurrent enrollment program is to give students access to general education courses, major course

requirements, and major electives, cost-savings calculations are based on these three categories only since they are identified by the concurrent enrollment program.

Other accelerated learning programs such as Advanced Placement are not included. This analysis does not include information about facilities, faculty, or other costs associated to the requirements of the high schools or colleges because the funding received ($500 per annualized full-time equivalent student) to administer the concurrent enrollment program are restricted funds which may only be used to cover costs of the concurrent enrollment program. The question related to this is whether the funding provided is sufficient or not. According to the Concurrent Enrollment Director at Salt Lake Community College, funding is sufficient to cover administrative costs.

Even though additional savings may be realized as students successfully complete concurrent enrollment courses because construction of new buildings is postponed, and other capital budget and related operating budget spending is delayed, these savings are not included in this study. Indirect costs and savings and opportunity costs are not part of this study.

Definitions

Accelerated learning program is any program which provides a means for high school students to earn high school credits and graduate from high school early. Examples may include advanced placement programs, concurrent

enrollment or work-study programs. Students are not limited to participation in one accelerated learning program but may participate in many such programs.

Advanced Placement is an accelerated learning program with objectives similar to those of concurrent enrollment programs. However, college credit is earned through advanced placement by passing a standardized test after the course has been completed. High school credit is received whether the advanced placement test is passed or not.

Annualized full-time-equivalent student is a student or combination of students who successfully complete 30 semester hours of college credit in one academic year.

Associate of Arts Degree is a two-year college degree intended to prepare students to transfer to a 4-year college or university. In addition to completing core courses in the selected major, this degree completes the general education requirements for a baccalaureate degree. The difference between an Associate of Science degree and an Associate of Arts degree is the language requirement included in an Associate of Arts degree.

Associate of Applied Science Degree is a two-year college degree intended to prepare students to enter the work force. This degree contains fewer general education courses and more core courses in the student's chosen major.

Associate of Science Degree is a two-year college degree intended to prepare students to transfer to a 4-year college or university. In addition to completing core courses in the selected major, this degree completes the general education requirements for a baccalaureate degree.

Concurrent Enrollment means enrollment in college courses for credit by high school students who continue to be enrolled as high school students and counted in Average Daily Membership (Board of Regents Policy and Procedures, page 36 in Salt Lake Community College Concurrent Enrollment Handbook, 1997). High school credit and college credit are earned only if the course is successfully completed. The grade earned is based on successful completion of work required by the course rather than by passing a standardized test after the course has been completed. The terms concurrent enrollment, dual credit and joint credit are synonymous.

Cost-benefit analysis refers to an analytical procedure for determining the economic efficiency of a program, expressed as the relationship between costs and outcomes, usually measured in monetary terms.

Cost-effectiveness analysis refers to the appraisal of programs on the basis of their costs and their effects in producing a desired outcome.

Efficiency assessments include cost-benefit and cost effectiveness analyses and provide a frame of reference for relating costs to program results.

Dual Credit is a term used by some authors rather than the term concurrent enrollment. The terms concurrent enrollment, dual credit and joint credit are synonymous.

Evaluation as used within the application of social research procedures entails a description of the performance of the entity being evaluated and some standards or criteria by which that performance is judged.

Joint Credit is a term used by some authors in place of concurrent enrollment. The terms concurrent enrollment, dual credit and joint credit are synonymous.

Postsecondary option is a term used in the State of Minnesota's Statewide Choice program which enables high school juniors and seniors to take courses at public or private higher education institutions for both high school and future college credit.

Program effects are the impacts of a social program.

Program efficiency is one of the five domains of Program Evaluation and attempts to determine if program effects are attained at a reasonable cost.

Program evaluation is the use of social research methods to systematically investigate the effectiveness of social intervention programs.

Salt Lake Community College's Concurrent Enrollment Guidelines is a publication that provides the guidelines for the Salt Lake Community College's concurrent enrollment program.

Student Information System is the computer system at Salt Lake Community College that contains the raw data relating to all enrollments at the college.

Utah State Board of Education is the governing body in the State of Utah for all State sponsored public education institutions.

Utah State Board of Regents is the governing body in the State of Utah for all State sponsored higher education institutions.

Utah State Board of Regents Policy and Procedures are the policies and procedures which form the foundation of Salt Lake Community College's concurrent enrollment program.

Organization of the study

The remainder of this study is organized as follows: Chapter Two contains a review of the literature. This chapter includes a brief history of the development of the community college and emphasizes its relationships with four-year colleges, universities, and high schools. The primary focus of this section of Chapter Two is the development of partnerships between high schools, community colleges, and four-year colleges and universities rather than to provide a complete history of the development of the community college. Different types of partnerships between high schools and post-secondary educational institutions are identified. As one of the types of partnerships, concurrent enrollment concepts and program structure are presented. Information about Utah State Code, Utah State Board of Regents Policy and Procedures, Utah State Board of Education Rules, and Salt Lake Community College Guidelines and their relationship to concurrent enrollment are discussed. Chapter Two also includes information about other dissertations which have studied concurrent enrollment programs.

Chapter Three contains the methodology used to conduct the study. This chapter addresses the methods and procedures for collecting and analyzing the data.

Chapter Four describes information relating to the context of the study. This information includes the plans of concurrent enrollment students after high school graduation, colleges or universities concurrent enrollment students plan to attend, whether or not concurrent enrollment affected the student's decision to attend college, what students plan to study, and if students were satisfied with their concurrent enrollment experience. Information is included which identifies number of concurrent enrollment students by high school and courses offered at each high school.

Chapter Five presents results of the study. This chapter includes findings related to the general research questions and findings that pertain to specific concerns listed with each general research question.

Chapter Six presents the conclusions and recommendations relating to the cost-effectiveness of the concurrent enrollment program at Salt Lake Community College. Information presented relates to cost-savings to students and the State of Utah. Included in the recommendations are suggestions for additional research.

Summary and significance of the study

This study is significant and timely in light of the continuing increase in the student population in the State of Utah and, specifically, in Salt Lake and Tooele Counties, which make up Salt Lake Community College's service region.

As the student population increases, more pressure is placed on higher education institutions and the State of Utah to provide programs which allow students to complete efficiently their higher education experience. Since this study focuses on cost-savings to students and the State of Utah, information resulting from this study will be of interest to the concurrent enrollment department at Salt Lake Community College charged with offering this program, to the Utah Board of Regents, who receive an annual concurrent enrollment report, and to State Legislators and legislative analysts as fiscal decisions are made at the state level. Because they administer, support, or participate in Salt Lake Community College's concurrent enrollment program, College administrators, faculty and staff, school district administrators, and high school administrators and faculty will also be interested in the results of this study.

This study is significant in that it provides fiscal information that has not been available previously. The literature search did not disclose any information about funding of concurrent enrollment programs including an analysis of the program's financial benefit from the funding entity's (the State of Utah) perspective. This study also provides a "process" which may be used in future similar studies.

CHAPTER TWO

Review of Related Literature

The review of literature related to concurrent enrollment includes five main sections. First, a brief historical perspective of community colleges, which shows that concepts supporting concurrent enrollment have been present in the foundational philosophies of two-year colleges since their inception. Second, literature related to college/high school partnerships, compacts, and collaboration is presented. This literature identifies programs for gifted students, average students, vocational students, and at-risk students. Concurrent enrollment concepts and program structure are included. Third, a brief statement of the relationship between Utah State Legislation, which grants authority to the Utah State Board of Regents and the Utah State Board of Education for the State's concurrent enrollment program, the Utah State Board of Regents Policy and Procedures, and the Utah State Board of Education Rules is described. Fourth, a summary of Salt Lake Community College's concurrent enrollment program guidelines is provided. Fifth, a summary of dissertations relating to concurrent enrollment is provided. Dissertations cover a wide range of topics related to concurrent enrollment programs, but none of them deals with financial aspects of concurrent enrollment programs.

A Brief Historical Perspective of Community Colleges

At the present time the community college is the largest and fastest-growing sector of higher education in America. Community colleges were created

when they were needed, and they have evolved over the years based on specific needs in their communities, their states, and the nation (Witt, 1994).

Many of the first theorists to favor the concept of a two-year college wanted to keep a growing number of high school students out of major universities. They viewed the university as a place of scholarship, research, and specialization and argued that the first two years of college were actually an extension of high school and had no place in a research university.

The earliest plan for creating two-year colleges was published just after the American Revolution. Doak Campbell, secretary of the American Association of Junior Colleges, cited it at the Association's 1929 convention.

> I call your attention to a notable book in American education which was written at the suggestion of Thomas Jefferson, by DuPont de Nemours. This book, *National Education*, was written at the beginning of the last century. In it the author outlines quite in detail...a secondary school which he calls a 'college,' and which rather closely fulfills the description of a junior college. (Campbell, 1929, p.13)

Pierre-Samuel DuPont de Nemours (1923) proposed an institution that would fall between the secondary school and the university. Although none of the American theorists referred to DuPont's book, their ideas were remarkably similar to his.

The first serious proposal for separating the lower division of the university curriculum came seventy years after the du Pont book, in 1851. Henry Tappan

blasted American higher education. "In this country," he said, "we have no universities. Whatever may be the names by which we choose to call our institutions of learning, still they are not universities" (Diener, 1986, p. 27).

Tappan proposed radical changes in the "deficient" American university. His plan required students to complete their general education in a college before being admitted to a university. These colleges would "guard the entrance of the universities" (Diener, 1986, p. 24). Under Tappan's plan students who entered the university would be better prepared to conduct scholarship and research. Even though Henry Tappan became president of the University of Michigan in 1852, his proposals were never successfully implemented there or elsewhere.

William Watts Folwell proposed a system similar to Tappan's system at the University of Minnesota in 1870, the year after he became president of the University of Minnesota. His plan was known as the Minnesota plan. Even though the Board of Regents adopted Folwell's plan unanimously, it was never implemented because about "half of the faculty members were opposed to the plan" (Gerber, 1971, p. 53).

Although Folwell's plan ultimately failed, it created considerable attention among other university presidents. After reviewing the Minnesota Plan, President Charles Eliot of Harvard wrote, "Your notion of relegating the studies of the Freshman and Sophomore years of the common American college to a secondary department squares with our practice and hopes" (Buck, 1933, pp. 210 - 211).

Folwell's ideas also influenced William Rainey Harper, founding president of the University of Chicago. Early in his career Harper was given a copy of Folwell's plan and "expressed his high approval and appreciation of the principles involved" (Gerber, 1971, p. 52).

Folwell's ideas fit well with Harper's own plan for the "great university." However, unlike Tappan and Folwell, Harper put these new ideas into action. Harper successfully separated his university's lower and upper divisions and campaigned for the establishment of six-year high schools and two-year colleges. "Tappan and Folwell expressed ideas similar to Harper's a generation earlier, but it was Harper who had the resources and ambition to try to transform the American education system" (Radcliff, 1986, p.12).

After a century of discussion and false starts, the junior college movement finally began to move forward. The birth place of this new movement was the University of Chicago under President William Rainey Harper. President Harper said, "I have a plan which is at the same time unique and comprehensive, which I am persuaded will revolutionize university study in our country" (Witt, p. 13). Harper predicted that the junior college idea would revolutionize higher education in America (Goodspeed, 1928, p. 110-111).

In 1892 Harper divided the lower and upper divisions at the University of Chicago. Initially, the lower division departments were referred to as "Academic Colleges," to indicate their similarity to high schools and academies (University of Chicago, 1892). The upper division departments were known as the "University Colleges" or "Senior Colleges" (Storr, 1966, p. 113). In 1895 Harper coined a

new name for lower-division departments: he called them junior colleges "for want of a better name" (Campbell, 1929).

Harper's plan for the junior college went far beyond dividing the lower and upper divisions. His long-range goal was to develop a system of free-standing two-year colleges "affiliated" with the university. These affiliated institutions would take over the training of freshmen and sophomores, allowing the university to concentrate on advanced studies and research (Storr, 1966).

Harper's ideas were not limited to the University of Chicago. He developed a nationwide plan for creating junior colleges. His strategy was threefold. The first part of the plan involved small liberal arts colleges. In the 1890s hundreds of these colleges were failing, and those that remained could not compete with expanding universities. Harper proposed modifying these floundering colleges into junior colleges. Secondly, he encouraged new colleges to limit their curricula to two years (Colvert & Littlefield, 1961; Griffith, 1976; Hardin, 1976). The third part of Harper's strategy involved the "development of high schools into junior colleges" (Diener, 1986, p. 57). He encouraged a network of secondary schools to affiliate with the University of Chicago.

By the turn of the century, there was an increasing demand for the high school curriculum to expand. Local educators and parents, raising the issue of articulation with colleges and universities, wanted post-diploma courses equal to grades thirteen and fourteen ("Proceedings," 1904). Yet few students were willing to take post-diploma classes at their high school if those courses did not count toward a college degree. On the other hand, if a transfer system could be

established, many students would opt for courses at their local high school over the inconvenience and expense of attending a faraway university (McLane, 1913).

The University of Chicago already had an articulation system in place through its Board of Affiliating and Co-operating Schools. Harper had formed this network of high schools to provide feeder schools for the university. The university's Board of Affiliations worked closely with the university's lower division, called the junior colleges. Before the turn of the century, several affiliated schools asked for permission to offer lower division courses on their campuses. The first such proposal, which in my opinion might be considered the beginning of the concept of concurrent enrollment, is reported in the board's minutes of October 15, 1897:

> [Dean John Grant, of the Harvard School of Chicago] moved that courses in the work of the Junior Colleges may be given at the Affiliated Schools provided (1) that every such course shall be approved by the Departmental Examiner or other proper person in the proper Department of the university, and (2) that the final examination of such cases shall be set by the direction of that instructor in the University by whom such course is usually given in the University (University of Chicago, 1897).

The board passed both of Grant's motions but reversed itself three months later because of a negative committee report.

Two related motions were presented to the board in January, 1899. These motions allowed students who gained more than the required units in high school to receive college credit for their work but required students to stay in high school longer than four years to receive college credit. These motions created the basis for the six-year high school and were passed on the first reading.

Almost immediately, affiliated high schools began offering college courses. As public demand grew, school boards approved a fifth and sixth year of high school instruction. The first six-year high school began in 1901 in nearby Joliet, Illinois.

Joliet High School affiliated with the University of Chicago through the guidance of J. Stanley Brown. Appointed principal in 1893, Brown, who was a personal friend of Harper's (Ratcliff, 1986, p.12), became a supporter of Harper's junior college scheme and a leader of the Board of Affiliations (Hardin, 1976, p. 22-23).

Brown showed an early interest in offering post-diploma courses. In 1896 he corresponded with several university professors about the idea of granting advanced credit for such courses. A Latin professor from the University of Michigan replied:

> The University is glad to give some advanced credit for work done in this way. It encourages the student and reduces the amount of required work to be done in the college course, so that the student has more time for the heavy ... courses of the senior year (Fretwell, 1954, p. 13).

In Joliet's early years, Brown avoided using the term junior college. Instead, he referred to the new section as the "postgraduate department." As one of Brown's faculty members, I.D. Yaggy, later explained, this choice was influenced by local politics: "[He] was very much afraid that the taxpayers might object to using high school funds for college work if it were publicized too much" (Fretwell, 1954, p. 15).

In 1916, after the construction of a separate library and offices for the postgraduate department, Joliet was officially recognized by the North Central Association of Colleges and Secondary Schools and became known as Joliet Junior College. Despite these changes Joliet Junior College remained essentially an advanced department of the high school (Fretwell, 1954, pp. 10-20).

The second six-year high school was established at Goshen, Indiana. Goshen High School began its post-diploma courses in the fall of 1904, with seven students paying a tuition of $30 a year. The Board of Affiliations of the University of Chicago encouraged and accredited the school. Goshen's superintendent explained the reasons for switching to the new curriculum:

> The six years' work offered by the Goshen High School is a result of real demand .... [In the past] a number of parents kept their children at home the year after graduation because they thought them too young to be sent away from home. During the year out of school the boys usually found work ... and the girls developed other ambitions. The plan for extending the course was projected to

satisfy cravings of the first class ... and to correct the mistaken tendencies of the second (Diener, 1986, p. 62).

For its first eighteen years, the junior college movement was centered in the Midwest. At least thirteen junior colleges and six-year high schools, virtually all of which were connected in some way with the University of Chicago, had been founded by 1910 (Fretwell, 1954, p. 148). The first junior colleges were the lower division colleges of the University of Chicago.

Missouri became an early leader in the establishment of private junior colleges. R.H. Jesse, president of the University of Missouri from 1891 to 1908, was a strong supporter of these colleges. He and his close friend William Rainey Harper shared the view that the freshmen and sophomore college years were a part of secondary education. In 1896 Jesse told a meeting of the North Central Association of Colleges and Secondary Schools:

> The first two years of college are really secondary in character. I always think of the high school and academy as covering the lower secondary period and the freshman and sophomore years of college as covering the upper secondary period (Carpenter, 1962, p. 477).

It was Jesse's successor, Ross Hill, who brought these ideas into reality. In the early years of the century, Missouri had a large number of church-related four-year colleges and women's finishing schools. Hill campaigned to transform these institutions into junior colleges. In return the university would accredit the schools and accept their graduates (Eells, 1934, p. 34).

California was a fertile ground for the junior college movement. Unlike eastern states, California did not have an extensive system of small four-year colleges. Its two large universities were clustered in the San Francisco bay area. Although there were a few small colleges in other areas, most California towns had no access to higher education (McLane, 1913, p. 163).

In California, both the democratic and theorist forces supported the growth of the junior colleges. Stanford and the University of California-Berkeley, both research institutions, had enacted restrictive admission requirements before the turn of the century (Brint & Karabel, 1989, p. 47). The presidents of these schools viewed the freshman and sophomore years as a part of secondary education and sought to separate them from the work of the university (McLane, 1913). At the same time, the democratic forces that represented the rural counties were demanding post-diploma courses . These opposing groups would eventually come to terms and in the process foster the rapid growth of junior colleges.

President David Starr Jordan of Stanford became the most important figure in the early California junior college movement. His "dynamic articles and addresses urging the amputation" of the university's lower division "made the public sit up and take notice" (Lang, 1915, p. 120).

Jordan was infected with the junior college idea by Harper. The two friends kept up an extensive correspondence from 1893 until 1905. Both were founders of the Association of American Universities and shared membership on several other educational and religious boards. Jordan visited the University of

Chicago on several occasions (Harper, 1899). Ratcliff (1987a) described Harper's effect on Jordan:

> [Jordan] and William Rainey Harper had discussed the merits of encouraging small colleges to restrict their curriculum to the first two years ... His interchanges with Harper in the Association of American Universities reinforced his notion that proper university education should begin with the junior year (p. 9).

The early two-year colleges included in their curriculum vocational courses intended to prepare students for an occupation and courses which were intended to prepare students for transfer to universities. William Rainey Harper in 1898 stated that many students were likely to terminate their education after completing junior college and honorably receiving an associate degree (Diener, 1986). Some junior colleges were anxious to specialize in industrial, engineering, and vocational directions, with their main interest in young people who did not go beyond instruction offered by the junior college (Angell, 1915). The first California junior college at Fresno offered practical courses in agriculture, including instruction in diary farming and citrus, peach, and apricot growing (Fields, 1962). The California junior college regulations of 1921 included a provision for courses of instruction designed to prepare students for agriculture, industry, commerce, home-making, and any other courses deemed necessary (Ricciardi, 1928).

By the early 1920s the American Association of Junior Colleges' official declaration of a junior college included a broad scope of community and vocational education. "The junior college may, and is likely to, develop a different

type of curriculum, suited to the larger and ever changing civic, social and vocational needs of the entire community in which the college is located" (American Association of Junior Colleges, 1922, p. 2).

To meet the greater demand for vocational training, junior colleges increased their career offerings (Ingalls, 1937). Junior college leaders were recommending an astounding array of vocational training, including accounting, architecture, art, automobile mechanics, aviation, banking, physician assisting, dental assisting, hairdressing, hotel keeping, laboratory assisting, lathe operation, cafe management, civil engineering, drafting, surveying, radio repair, finance, insurance sales, stock trading, physiotherapy, general business, home administration, office management, mechanical engineering design, machine operation, merchandising, music, nursing, police work, publications, recreational leadership, stenography, x-ray operation, and secretarial work (The Junior College World, 1936, pp. 95-96; Reports and Discussions, 1936, pp. 99-100).

Following World War I, the profile of the college student changed. Many students were working their way through school and studying for a specific occupation. Some were already married and had a family. An increasing number enrolled in the inexpensive public junior colleges springing up around the country. According to Eells (1931):

> Going to college has become the great American habit. The junior college should be the "people's choice" and be available to all. It should provide collegiate opportunities for the mass of high school

> graduates who can't, or won't, or shouldn't become university students (p. 162).

The local community college had made higher education more accessible to the average citizen.

During the decade of the twenties junior college leaders placed an increasing emphasis on vocational education. In 1924 Leonard V. Koos surveyed university deans to find out if some professionals could be taught at two-year colleges. In engineering alone, the deans cited forty-three occupations that could be shifted to the junior college level (Koos, 1924, p. 108). These "semi-professionals" became the framework for a national effort to expand junior college vocational programs. Koos also studied the catalogs of early junior colleges. His findings revealed that vocational, terminal education was frequently identified as a primary college mission and that 50 percent of the junior colleges were already providing "occupational training of junior-college grade" (p. 124).

The first national meeting for two-year colleges was organized by the U.S. Bureau of Education by George Zook, the bureau's higher education specialist (Eells, 1931). The conference took place on June 30 and July 1, 1920. In his opening address Zook explained the bureau's reasons for calling the conference, and his hopes for a national association:

> During the last twenty years, there have been formed a large number of national educational associations...The junior colleges are practically the only large body of people concerned with a definite type of education which so far have not held any national

> conferences. It, therefore, occurred to the Commissioner of Education to call a meeting of representatives from the junior colleges of the country for a full and frank discussion of their mutual interests and problems. This, in brief, is the occasion for this conference (Eells, 1931, p. 75).

Only thirty-four delegates attended the two-day conference. Of the nation's 165 junior colleges, only twenty-two were represented. Many of the educators refused to attend, doubting that "the junior college had a future important enough to justify attendance" (Zook, 1946, p. 411). California, the fastest growing state, had no official delegation to the conference (Rutledge, 1951, p. 19). However, there were representatives from major four-year universities and the press (Reid, 1928).

Despite disagreements, the delegates succeeded in creating a national organization: the American Association of Junior Colleges. This name remained until 1972 when the organization became the American Association of Community and Junior Colleges. In 1992, the name was again changed to the American Association of Community Colleges (Witt, 1994).

The American Association of Junior College's second annual meeting was held in Memphis, Tennessee. Before the meeting adjourned, the committee on standards presented the results of its two-year study. The committee decided that junior college accreditation should be a function left to either a state university, a state education department, or one of the regional accrediting associations.

During this meeting, the committee presented the first nationwide definition of a junior college. This definition legitimized the comprehensive junior college curriculum, including community service and vocational and recreational courses (Barton, 1928). The definition stated:

> The junior college is an institution offering two years of instruction strictly of collegiate grade. This curriculum may include those courses usually offered in the first two years of the four year college; in which these courses must be identical, in scope and thoroness [sic], with corresponding courses of the standard four year college. The junior college may, and is likely to, develop a different type of curriculum, suited to the larger and ever changing civic, social and vocational needs of the entire community in which the college is located. It is understood that in this case also all the work offered shall conform to collegiate standards (American Association of Junior Colleges, 1922).

This definition legitimized the comprehensive junior college curriculum, including community service and vocational and recreational courses (Barton, 1928), and spelled out all the components of the modern community college.

Before 1930 there were clear national standards for junior colleges, as devised by the American Council on Education and the American Association of Junior Colleges. The national accrediting agencies had adopted minimum standards for junior colleges and had admitted two-year schools to membership. In addition, junior colleges had their own national association and journal. The

junior college had clearly become a recognized component of America's educational system (Witt, 1994).

On July 13, 1946, President Harry S. Truman appointed a commission to study America's junior college movement. The President's Commission on Higher Education (PCHE), better known as the Truman Commission, published a six-volume report, *Higher Education for American Democracy*, that pushed the two-year college into the forefront of American higher education (Bonos, 1948, p. 426).

George Zook, former commissioner of education, was appointed chair of the President's Commission on Higher Education. Henry Dixon, president of Weber College, the largest junior college in Utah, and Frederick Kelly, of the U.S. Office of Education, who had served on the advisory board of the Junior College Journal, served as commissioners with George Zook. The influence of these three men ensured that junior colleges would be written into the commission's blueprint for higher education (Witt, p. 130).

The Truman Commission estimated, based upon results of the Army General Classification Test given to nearly ten million servicemen during World War II, that 49 percent of the American public had "the mental ability to complete 14 years of schooling" (President's Commission on Higher Education, 1947, vol. 1, pp. 40-41). To meet the educational needs of the under-served, the commission proposed a national effort to create new two-year colleges.

The proposed colleges would offer education through "the fourteenth grade." These institutions would be extensions of secondary education. They

would be locally controlled but partially funded by state and federal governments (President's Commission on Higher Education, 1947, vol. 1, pp. 67-70). The courses offered would include the first two years of a four-year degree and terminal, semiprofessional, public service, and recreational programs to fulfill local needs and to serve citizens of every age, race and social class.

The college envisioned by the President's Commission on Higher Education would "fit into a comprehensive state-wide system of higher education" as a "community center of learning" (President's Commission on Higher Education, vol 1, pp. 67-70).

The President's Commission on Higher Education's definition of the community college remains remarkably accurate today, which states:

> The Community College seeks to become a center of learning for the entire community, with or without the restrictions that surround formal course work in traditional institutions of higher education. It gears its programs and services to the needs and wishes of the people it serves (President's Commission on Higher Education, vol. 1, pp. 69-70).

Community college leaders have become experts in reaching out to untapped sectors in the community. To attract new students, colleges offered courses in high schools, senior citizen centers, and even prisons. Other outreach efforts have brought a massive increase in part-time enrollment, which nearly tripled between 1970 and 1990. By 1990 the average age of two-year college students had risen to twenty-eight, and more than half of all students were over

twenty-four years old (American Association of Community and Junior Colleges, 1990).

Both full-time and part-time matriculated students surged in 1990 bringing total enrollments to nearly six million students. The nations 1,200 two-year colleges enrolled nearly 45 percent of all students in American higher education (American Association of Community and Junior Colleges, 1988; Mahoney, 1985, 1986,1990; Mahoney & Jimenez, 1992; Mahoney & Sallis, 1991).

Though community colleges have been successful in spreading across the country, the community college has generated questions about some procedures found in community colleges. According to Cohen (1991) issues existed in the areas of curriculum, students, institutional mission, and funding.

Issues relating to curriculum and students were central to the "cooling out" thesis proposed by Clark, which was developed as a result of shunting students from transfer programs to remedial or occupational programs (Cohen, 1991). In his thesis Clark (1960) stated, "These two-year colleges screen out students who did not have the skills to compete a bachelor's degree and, instead, channel them toward an appropriate vocational program" (p. 333). According to Clark, the cooling-out process began with pre-entrance testing , shunting the lower-ability students to remedial classes, and eventually nudging them out of the transfer track into a terminal curriculum.

Twenty years later, Clark reexamined his thesis, asking whether the cooling-out function might be replaced by some other process. Six options were named, which included pre-selection of students, transfer-track selection, open

failure, guaranteed graduation, reduction of the distinction between transfer and terminal programs, and making structural changes that would eliminate the two-year college's transfer function either converting all two-year institutions into four-year institutions or doing away with community colleges altogether. However, Clark rejected all of these alternatives (Cohen, 1991, pp. 355 - 356)

Clark concluded that the problem that causes colleges to respond with the cooling-out effort is not going to go away by moving it inside of other types of colleges (Cohen, 1991). Clark (1980) stated, "Any system of higher education that has to reconcile such conflicting values as equity, competence, and individual choice has to effect compromise procedures that allow for some of each. The cooling-out process is one of the possible compromises, perhaps even a necessary one" (p. 30).

> According to Cohen (1991), "the real benefit of the community college cannot be measured by the extent to which it contributes to the overthrow of the social-class system in America. Nor can it be measured by the extent to which the college changes the mores of its community. The community college is a system for individuals, and it does what the best educational forms have always done: It helps individuals learn what they need to know to be effective, responsible members of society" (p. 357).

Clark (1980) acknowledged that his thesis was tentative and deplores the way that it has been used. He stated, "The trouble with the leap to grand theory is that, poorly grounded in empirical research, it is particularly vulnerable to

ideology of various persuasions" (p. 30). Palmer's (1987) work has gone a long way toward deflating the notion of cooling out by showing that the transfer and occupational tracks are less separate than the funding formulas and the way that the curriculum is organized would suggest.

Community colleges have become a major component of higher education in the United States, and they continue to strive to serve the citizens in their communities. Partnerships, compacts, and collaboration have played an important role as community colleges continue to serve.

College/High School Partnerships, Compacts and Collaboration

While the roots of the relationships between high schools and colleges go back more than two centuries, the closer collaboration required for successful partnerships is a relatively recent phenomenon (Greenberg, 1992). Factors which Greenberg has identified that explain this increased interest in partnerships and collaboration include:

- a changing student population,
- democratization of higher education admissions policies,
- students' frequent lack of skill preparedness,
- awareness of a need for new models of inservice staff development for high school teachers,
- greater competition in college student recruitment,

- increased awareness of the need for enhanced articulation between levels of institutions by administrators, parents, and state education department officials, and
- an awareness that the challenges confronting contemporary secondary education — particularly for at-risk students, women, and minorities — require a community effort.

A recent study by the American Association of Community and Junior Colleges suggested that the majority of two-year colleges are involved in collaborative programs with local secondary schools (Parnell, 1985). This study identified dual or joint enrollment (concurrent enrollment), shared faculty and/or facilities, advanced placement, and program coordination efforts as the areas of involvement. Two additional areas of collaboration are programs to help high schools more effectively prepare their students for college and activities to improve institutional communication (Van Patten & Dennison, 1986).

In addition to the collaborative programs, high school - college partnership models include concurrent enrollment models (also called dual or joint credit models); enrichment, compensatory, and motivational models; academic alliances and teacher-to-teacher models; pre-service teacher education models; mentoring/tutoring models; and school improvement and restructuring efforts (Greenberg, 1992).

Of these partnership models and collaborative programs, concurrent enrollment programs are the most common form of collaboration (Greenberg, 1992). Concurrent enrollment programs provide an opportunity for high school

students to engage in college-level courses usually for simultaneous high school and college credit. Concurrent enrollment programs have been designed to serve a variety of students including gifted students (Gaines & Wilbur, 1985; Wilbur & Chapman, 1978), students who have shown above average academic ability (Crews & Pierce, 1986), students with vocational or technical interests (Littleton Community Network, 1996), students who desire to transfer to or attend four-year colleges and universities (Wolf & Geiger, 1986), and at-risk students (Greenberg, 1988).

Syracuse University's Project Advance in the early 1970s was the first configuration of a secondary and post-secondary dual credit partnership and targeted gifted students (Gaines & Wilbur, 1985; Wilbur & Chapman, 1978). St. Petersburg Junior College, in partnership with the Pinellas County School System, used the concurrent enrollment program as a means of challenging its best high school students through accelerated learning (Fincher-Ford, 1997).

A study by Olszewski-Kubilius (1995) suggested that gifted students who participate in early entrance programs have performed impressively. These students earn higher grade point averages than regular freshmen (Eisenberg & George, 1979; Janos, Sanfilippo & Robinson, 1986; Noble, Robinson & Gunderson, 1993), typically in the B+ to A- range (Stanley & McGill, 1986; Swiatek & Benbow, 1991), and equal to those of the National Merit Scholars at the same university (Janos, Sanfilippo & Robinson, 1986). Compared to typical college students, they are more likely to complete college (Pressy, 1967) and to complete college on time (Brody, Assouline & Stanley, 1990; Stanley & McGill,

1986). These students also earn general and departmental honors (Stanley & McGill, 1986; Brody, Assouline & Stanley, 1990). Generally, the academic performance of students with exceptional intellectual abilities who participated in an early entrance program was overwhelmingly positive (Olszewski-Kubilius, 1995).

Concurrent enrollment programs intended for above average students include DeKalb Community College (Crews and Pierce, 1986), University of Dayton, Ohio State University, and the University of Utah (Geiger & Wolf, 1986). DeKalb Community College's concurrent enrollment program offers general core courses, staffed by college instructors, offered on the high school campuses to college-bound students during their senior year (Crews and Pierce, 1986). DeKalb Community College's program is designed to reach the top 20 percent of the graduating class.

In 1986, John Geiger and Joan S. Wolf described high school students participating in concurrent enrollment courses at the University of Dayton, Ohio State University, and the University of Utah as meeting many of the criteria associated with giftedness. Other characteristics of the concurrent enrollment population at the three universities revealed that it comprised fairly affluent families (43.8 percent reporting annual income of more than $40,000), mostly Caucasians (90.6 percent), and almost evenly divided between males (46.7 percent) and females (53.3 percent). University courses taken included fine arts, humanities, math, and science, with a few enrollments in non-academic courses.

In their study, Wolf and Geiger (1986) state that for the most part students were satisfied with their concurrent enrollment experience. A high percentage (more than 90 percent) would recommend the program to others. Nearly 80 percent of the students indicated that the program offered more challenge than academic courses in the high schools. The top three reasons why students enrolled in concurrent enrollment courses at the University of Dayton, Ohio State University, or the University of Utah were (1) to reduce the boredom in high school (70.3 percent), (2) to get a head start in college (70 percent), and (3) to take courses not available in the high schools (37.7 percent).

Parents' and counselors' levels of satisfaction with the program were also high. Approximately 96 percent of parents and counselors indicated that the program had positive educational benefits. However, both students and parents saw the lack of counselor support as the greatest weakness of the program. Counselors identified scheduling problems as the greatest weakness. Students, parents, and counselors cited lack of communication and feedback from university personnel as a weakness (Geiger & Wolf, 1986).

Other studies identify concurrent enrollment programs for students who are average or below average. Three programs located in New York City were studied in 1985-86. Each program purported to address the needs of low- and moderate-achieving students and provide students with opportunities to succeed in college courses while high school seniors. These three programs are City-As-School, Kingsborough Community College's College Now, and Middle College High School (Greenberg, 1988).

City-As-School is a New York City public alternative high school whose primary objective is to link students with off-site learning experiences. A cross-section of the high school population of New York's five boroughs is accepted to attend City-As-School. Preference is given to students who have completed the ninth and tenth grades and who have fulfilled two years of mathematics and science. (City-As-School High School, 1986a).

City-As-School claims that 24 percent of their students enroll in college classes. A profile of a recent graduating class revealed that 52 percent of the graduates had attended one or more college courses, and that the passing rate in college classes taken by City-As-School students was 72 percent (City-As-School High School, 1986b).

Kingsborough Community College's College "Now Program" uses local high school teachers as adjunct college staff to teach regular college courses on high school campuses. This model has been used successfully with high-performing students. However, the College Now Program seeks moderate performing students who have between 65 percent and 80 percent cumulative high school averages (Greenberg, 1988).

Middle College High School is located on the campus of City University of New York's LaGuardia Community College and is an alternative high school. Middle College High School's intent is to take advantage of the intimate curricular liaisons that may be fostered when high schools and colleges coexist on the same campus. Unlike many college models that use this relationship for gifted students, Middle College High School's approach to simultaneous

enrollment is the high-risk students considered potential dropouts (Greenberg, 1988).

To be eligible for admission to Middle College High School, students must have graduated from a local junior high school and meet one of four criteria. Students must have "(1) a high rate of absenteeism or (2) three or more subject area failures or (3) identified social and emotional problems stemming from the home environment or (4) evidence of some potential, which [Middle College Faculty] interprets as present in all students" (Lieberman, 1986, p.3).

In 1979, approximately 53 percent of Middle College High School students were more than two years behind in reading, and 40 percent were two years behind in math. During the 1985 - 86 school year, the ethnic distribution of the student body was 45 percent white, 33 percent Hispanic, 21 percent black, and 1 percent Asian. Forty percent of all students were on public assistance (Lieberman, 1986).

Given the prior assessment that all three programs comprised of low and moderate achievers, the college results seem appropriate. Kingsborough Community College's College Now Program did the best. Middle College High School students persevered, earning two-thirds of the credits for which they registered and maintained an overall average of nearly C+. Although they had the best skills of any group tested, City-As-College students struggled the most but maintained a C average and at the same time passed two-thirds of the courses for which they registered (Greenberg, 1988).

Not only are concurrent enrollment opportunities available for gifted, average and at-risk high school students, vocational/technical courses are also offered as concurrent enrollment courses. As described on the Littleton College Network Internet site (1996), The Arapahoe-Douglas Area Vocational School, a division of Arapahoe Community College, offers dual credit programs which allow high school students to receive college credit for vocational/technical courses in the following areas:

- auto technology,
- commercial art,
- comprehensive building trades,
- early childhood professions,
- engineering technology,
- machine technology,
- medical prep (physical therapy aide and medical office),
- restaurant arts, and
- telecommunications technology.

The mission of the Arapahoe-Douglas Area Vocational School is to serve the vocational/technical education needs of secondary, post-secondary, and adult students from member districts. To enable students to make a smooth transition from secondary to post-secondary programs without experiencing delays or duplication of learning, Arapahoe Community College and Arapahoe-Douglas Area Vocational School have entered into formal articulation agreements (Littleton College Network, 1996).

These partnerships and concurrent enrollment models indicate that students of many different levels of ability, interest, and circumstance have opportunities to participate in concurrent enrollment programs. Though concurrent enrollment programs serve a diversity of student populations and situations, general guidelines for concurrent enrollment programs are similar.

According to Fincher-Ford (1997) concurrent enrollment programs begin with a primary set of objectives. These objectives are to smooth the transition from high school to college, shorten the time required for high school students to complete an undergraduate degree (which provides cost savings), and eliminate the duplication of courses taken in high school and in college. Other objectives include sharpening students' general academic preparedness for college, expanding the academic options for college-bound students, and enhancing the college-credit options for technical education students. Concurrent enrollment programs enable high schools to allow access to courses which they are not able to provide (Gray, 1982). Concurrent enrollment programs can increase communication between secondary schools and colleges and universities regarding curriculum articulation and improvement (Hanson, 1980).

In support of these objectives, concurrent enrollment programs consistently create opportunities and real incentives for high school students to work hard academically, explore their educational interests before full-time college study, review various career options, and understand what is required of them to be successful in a career or profession (Fincher-Ford, 1997).

Guidelines on the delivery of concurrent enrollment courses are, for the most part, reasonably standardized. An example of concurrent enrollment guidelines is provided on the Internet by the Missouri Coordinating Board of Higher Education - February 1993. These guidelines contain two parts: first, institutional guidelines covering the delivery of all dual-credit courses, and second, guidelines for the delivery of dual-credit composition courses . These institutional and departmental guidelines are contained in Appendix A.

The institutional guidelines contain concurrent enrollment program requirements in the following areas:

- A definition of dual-credit (concurrent enrollment) courses and the eligibility requirements of students who desire to participate,
- A statement of the structure and content of dual-credit courses including course content, student requirements, and standards of evaluation,
- A statement identifying faculty qualifications and requirements for teaching dual-credit courses,
- A description of institutionally-approved assessment instruments and methods, and
- A statement of transferability of credit guidelines controlled by the Missouri Coordinating Board of Higher Education.

In addition to institutional guidelines, each department offering dual credit courses may develop departmental guidelines, as noted by the guidelines for the delivery of dual-credit composition courses. The guidelines outlined by the English Department provide detailed information in the following areas:

- Requirements and constraints for faculty approved to teach dual-credit courses,
- Requirements of syllabi used to teach dual-credit courses,
- Requirements of students desiring to participate in dual-credit writing courses,
- Requirements of the liaison from the coordinating college in conducting on-site visits,
- Requirements of the college in providing dual-credit instructors with support services,
- Requirements of the college liaison and the dual-credit teacher in assessing student work, and
- Requirements of the institution granting credit and the participating high school delivering the dual-credit courses in sharing joint responsibility.

Guidelines such as these are important in quality control efforts. High schools and colleges should implement measures to monitor the quality of dual-credit courses. The close monitoring of the program is not to challenge the integrity or the effectiveness of the teacher. Rather, it is intended to maintain program accountability. Quality control is vital and pertains to teachers, course materials, and the effectiveness of classroom instruction. Teachers must meet the criteria for employment as specified by accrediting agencies. Failure to maintain minimal standards as per the guidelines of accrediting agencies could jeopardize the institution's accreditation status, the institution's standing in the community, and the transferability of courses to senior-level institutions (Fincher-

Ford, 1997). Since dual-credit courses are college courses, all components of the course should reflect the same college-based standards: the same curricula, syllabi, and textbooks.

Before any concurrent enrollment begins, orientation sessions for faculty, students, and their parents should be held to address the purpose of concurrent enrollment. College and high school procedures for enrolling students, guidelines which will govern students' participation, and any other pertinent information should be addressed (Fincher-Ford, 1997). These orientation sessions help students to make the transition into concurrent enrollment courses and increase the likelihood of student success.

Utah State Legislation

The concurrent enrollment program in the State of Utah had its origin in Utah Code Annotated 1953, 53A-15-101, which directed the Utah State Board of Education to implement in collaboration with the Board of Regents the concurrent enrollment program. Using this and other Utah State Code, the Board of Regents Policy and Procedures were developed, and Utah State Board of Education rules were written. Board of Regents Policy and Procedures defines the requirements for higher education institutions, and Utah State Board of Education rules define requirements for public education institutions who participate in the concurrent enrollment program.

Legislation enacted in 1988 mandated that the Utah State Board of Education in collaboration with the Utah State Board of Regents shall implement

a program of higher education courses in public schools. (Utah Code Annotated 1953, 53A-15-101) Between 1988 and 1996, the initial legislation has undergone minor changes in wording to reflect current terminology and practice in public and higher education in the State. Examples of these minor changes include modification of the original text from "student education plan" to "student education-occupation plan" and "tuition" to "Higher education tuition and fees." The legislation as it currently exists is in principle the same as the original legislation. No major modifications have occurred.

Utah Code Annotated 1953, 53A-15-101 not only directed the Utah State Board of Education in collaboration with the Utah State Board of Regents to develop and implement a program of higher education courses offered in the public schools, it also directed student education plans, cooperation between public and higher education, and an annual report.

In order to be in compliance, the Utah State Board of Education and the Utah State Board of Regents worked together to implement a curriculum program and delivery system which allows high school students to complete high school graduation requirements and prepare for college admission requirements at the conclusion of the eleventh grade. This does not preclude students who participate in accelerated learning programs from graduating at an earlier time.

The legislation directed that the concurrent enrollment program would offer selected general and applied technology education courses for college credit through one or more of the state's higher education institutions. Students who participate may select a course of study which would allow the student to

take classes necessary to graduate from high school and become better prepared for a world of work or complete selected college level courses corresponding to the first year of course work at a university, college, or community college in the State's system of higher education. The delivery system and curriculum program shall be designed and implemented to take full advantage of the most current available educational technology. An annual report of the concurrent enrollment program will be provided to the Legislature and the governor by both boards.

Utah State Code not only provided direction in defining and implementing the concurrent enrollment program, it also provides early graduation incentives to students who graduate early from high school and to their school districts. Under this law, any secondary public school student who has completed all required courses or demonstrated mastery of required skills and competencies may, with the approval of the student, the student's parent or guardian, and an authorized local school official, graduate at any time. Students who graduate from high school early are offered scholarships. The amount of the scholarship is determined by how early the student graduates. The financial incentive for the school district is a percentage of the amount of scholarship the student receives.

Utah State Board of Regents Policy and Procedures

The State Board of Regents receives its authority to implement a concurrent enrollment program from Utah Code Annotated 1953, 53A-15-101. State Board of Regents Policy and Procedures, R165 Concurrent Enrollment,

defines the concurrent enrollment program in the state of Utah from a higher education perspective. The Board of Regents Policy and Procedures R165 referenced Utah Code Annotated 1953, 53B-1-103(3) and 53B-6-103. It also referenced State Board of Regents Policy and Procedures R161 and State Board of Regents Policy and Procedures R163.

State Board of Regents Policy and Procedures R165 states that the purpose of concurrent enrollment in its various forms is to provide high quality college-level academic and vocational-technical opportunities to qualified high school students. This purpose must take precedence over such issues as economic expediency or acceleration of the high school or college experience (R165-1.1.). Since Utah high schools are encouraged to provide a more challenging and useful twelfth grade experience for all students, the state's concurrent enrollment program's purpose includes assisting in this effort as well as to provide transition courses to be applied to post-secondary education (R165-1.3). Additionally, college instruction offered in the high school setting should include qualitative safeguards to preserve the rigor and standards of college requirements (R165-1.4).

Besides a stated purpose for the State's concurrent enrollment program, information related to student participation is provided (R165-4). This information states that students who wish to participate in concurrent enrollment should meet eligibility requirements which are sufficiently selective to predict a successful experience and provide college-level competition within the classroom (R165-4.1).

Eligibility requirements may include but are not limited to specific criteria outlined in State Board of Regents policy. These criteria include senior standing, a grade point average and A.C.T. composite score which predict success (generally considered to be a B average and score of 22 or higher), supportive letters of recommendation, and approval of high school officials (R165-4.1.1, R165-4.1.2, R165-4.1.3, and R165-4.1.4).

Normally implementing the eligibility requirements is the responsibility of each high school who participates in the concurrent enrollment program. However, when students are interested in vocational-technical concurrent enrollment courses, eligibility requirements are determined jointly by the public schools and the post-secondary institutions (R165-4.2).

Student participation in the concurrent enrollment program includes certain responsibilities on the part of the student. Students should understand that concurrent enrollment courses begin the college experience and a permanent college transcript. Registration for a concurrent enrollment course constitutes a commitment to enter the final course grade on the student's permanent college record, regardless of the results. Further, credit is earned by performance and participation throughout the class, rather than by an exit examination alone. Students are permitted to earn up to 30 semester credit hours of college credits through the concurrent enrollment program (R165-4.3 and R165-4.4).

State Board of Regents Policy and Procedures R165 provides guidelines for academic considerations (R165-5). These considerations state that

concurrent enrollment courses will be offered at a location which is most appropriate for students, faculty, and course content (R165-5). Qualified students who are able to commute to the college are encouraged to enroll in concurrent enrollment courses offered on the college or university campus. However, concurrent enrollment courses may be offered at high schools which are within that area (R165-5.1.1).

Qualified students who do not reside near a college or university may participate in concurrent enrollment courses offered at their local high school or other appropriate sites through interactive telecommunications or other non-traditional delivery method. Courses may be taught by full-time college or university faculty or by adjunct faculty. High school faculty may be approved as adjunct faculty by the participating college or university (R165-5.1.2).

Nomination of high school faculty to be approved as adjunct faculty who will teach the concurrent enrollment courses is the joint responsibility of the school district and the participating college or university. Final approval of the adjunct faculty is the responsibility of the appropriate college or university department. Selection criteria for adjunct faculty teaching concurrent enrollment courses is the same as those criteria applied to all other adjunct faculty appointments in specific departments (R165-5.2).

High school teachers who have been approved as adjunct faculty for the purpose of teaching concurrent enrollment courses should be included as fully as possible in the faculty development activities of the specific college or university department where the college course resides. In-service and

professional development activities for adjunct faculty teaching concurrent enrollment courses is an essential element of the concurrent enrollment program. Such activities should be coordinated between public and higher education full-time faculty and adjunct faculty. College or university faculty are responsible for providing in-service training and other appropriate workshop experiences prior to high school teaching concurrent enrollment courses as adjunct faculty. On-site monitoring of concurrent enrollment courses is also required (R165-5.3).

Course registration and the awarding of college credit for concurrent enrollment courses are the responsibility of the colleges and universities (R165-5.4). Generally, concurrent enrollment course offerings should be limited to a manageable number of courses in fine arts, humanities, science and social science. Resources should focus on quality instruction in these courses (R165-5.5). Courses approved to be offered concurrently should be introductory-level courses for a variety of majors and should allow students to satisfy some of the general education requirements at the state's colleges and universities. The vocational/technical area may offer a greater variety of courses (R165-5.5.1).

Courses selected for concurrent enrollment should be based on the strengths and resources of the respective high schools, colleges and universities, and be based on student need. Course content, examinations, teaching materials, and program monitoring are the responsibility of the appropriate higher education department or program to ensure quality and comparability with courses offered on the college's campus (R165-5.5.2).

Salt Lake Community College's Concurrent Enrollment Guidelines

Salt Lake Community College's Concurrent Enrollment Handbook contains concurrent enrollment guidelines and defines Salt Lake Community College's concurrent enrollment program. The College's Concurrent Enrollment Handbook was written using information from Utah State Legislation and State Board of Regents Policy and Procedures Manual. It also contains information from the Utah State Board of Education Rules and is made available to all high schools in the Salt Lake Community College service region.

Salt Lake Community College's Concurrent Enrollment Handbook provides information for implementation of the concurrent enrollment program from the College's perspective including faculty, staff, and administration who are responsible for the implementation and operation of the concurrent enrollment program. It contains guidelines for school district and high school personnel who are participating in the concurrent enrollment program. Requirements for participating in the concurrent enrollment program are provided for students and their parents (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997).

Salt Lake Community College's Concurrent Enrollment Handbook defines concurrent enrollment from the college's perspective. The definition states:

> Concurrent enrollment classes are college level classes offered to high school students for both high school and college credit. Concurrent enrollment students enroll for the class at both the high school and the college. While students earn high school credit, they

> also earn college credit which is recorded on a college transcript. Both vocational and general education classes may be offered. Teachers are qualified high school faculty who meet the Salt Lake Community College requirements for adjunct faculty. Courses taught at the high school differ only in their location from the same courses taught on the Salt Lake Community College campus. In all instances, instructor qualifications, syllabi, assignments, textbooks, the number of exams and grading requirements are identical (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997, p. 1).

The Salt Lake Community College Concurrent Enrollment Handbook provides information regarding program requirements for college faculty, staff, and administration; high school faculty and staff; and students and their parents. Some of the substantial provisions of the handbook relating to these areas are provided.

Information intended for college faculty, staff, and administration includes college concurrent enrollment policies, admissions and registrations, faculty liaison responsibilities, and adjunct faculty general qualification requirements by academic program. Concurrent enrollment policies identify service area restrictions, which means that Salt Lake Community College has the right of first refusal for all concurrent enrollment courses taught in the Granite, Jordan, Murray, Salt Lake City and Tooele school districts. Concurrent enrollment courses taught in any of these school districts by institutions other than Salt Lake

Community College or the University of Utah must be approved prior to the course being offered by the Chief Academic Officers of Salt Lake Community College and the institution desiring to offer the concurrent enrollment course in Salt Lake Community College's service region.

Enrollment policies also include teaching load requirements for all adjunct faculty including high school faculty who are teaching concurrent enrollment courses. Division Chairs are expected to enforce teaching load limits for all adjunct faculty. High school teachers teaching concurrent enrollment courses are considered adjunct faculty and are expected to adhere to the same requirements as adjunct faculty teaching regular credit courses. High school faculty who have taught concurrent enrollment courses prior to fall semester 1998 are considered "grandfathered" and may teach up to 15 credit hours of concurrent enrollment courses per semester. Those adjunct faculty who started teaching fall semester 1998 may teach up to 11 credit hours per semester. In technical/vocational concurrent enrollment courses, other unique criteria may be applied (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997).

Concurrent enrollment policies identify the level of courses which may be offered through the concurrent enrollment program. Within the School of Business and Industry and the School of Humanities and Sciences no course numbered above 2000 may be approved as a concurrent enrollment course. In the School of Technology, which includes the vocational courses, certain courses numbered above 2000 may be approved. Enrollments in the vocational courses may include students who have registered for concurrent enrollment and

students who have not registered for concurrent enrollment. In the School of Business and Industry and the School of Humanities and Sciences course enrollments must be entirely made up of concurrent enrollment students. Students who have not registered for concurrent enrollment courses will not be allowed in courses which contain concurrent enrollment students. (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997).

Admissions and registration requirements identify the admissions process the concurrent enrollment students need to follow. Students may apply as matriculated or non-matriculated students. Students who know that they will be attending Salt Lake Community College after high school graduation should apply for admission as a matriculated student (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997).

Specific instructions for applying and registering for classes is included in Salt Lake Community College's Concurrent Enrollment Handbook. Applications for admission are made available for students through the concurrent enrollment office. To register for Salt Lake Community College credit, students submit the official class request for each semester that they register. For classes taught at the high schools, the high school teacher assists the students in registering, and collects the applications, class request forms and appropriate fee payments. As this information is gathered and submitted, deadline dates must be adhered to (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997).

The concurrent enrollment program requires a Salt Lake Community College faculty liaison to work with the high school faculty member to ensure that college course materials, tests, assignments, syllabi, and textbooks are used. The faculty liaison is the college's representative for each concurrent enrollment course. Faculty liaison responsibilities include acting as a contact person for the concurrent enrollment instructor, answering questions, and providing information about the expectations of the department sponsoring the concurrent enrollment course. The faculty liaison is expected to make three site visits to the high school where the concurrent enrollment course is taught. Two site visits are to be made so that the faculty liaison attends the concurrent enrollment class. The third visit takes place during a closing meeting where follow-up can take place. Visit report forms are filled out for each visit the faculty liaison makes to the high school to meet with the high school teacher (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997).

Faculty liaisons invite high school faculty to attend department meetings, college adjunct faculty meetings, placement/assessment committees, and other activities that would be beneficial for the high school teacher. Faculty liaisons are responsible to understand the concurrent enrollment policies and procedures and apprise the Division Chair and Concurrent Enrollment Director of any impropriety, incompetency, or non-compliance with policy (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997).

After high school faculty have decided which concurrent enrollment courses they would like to teach, a course proposal form is filled out and signed

by a designated administrator at the high school and an authorized person from the school district. If the course proposal is for a high school faculty member who has never participated in the concurrent enrollment program, faculty member credentials which qualify the faculty member as an adjunct faculty member at Salt Lake Community College are provided with the concurrent enrollment course proposal.

Even though concurrent enrollment program information is distributed to every school district in Salt Lake Community College's service region, participation by individual high schools is initiated at the high school level. If an individual high school decides to participate, a high school faculty member works with a high school administrator or counselor to select from Salt Lake Community College courses which are approved concurrent enrollment courses the courses to be requested. The Salt Lake Community College academic department approves the course request and the high school faculty member (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997).

Once the course is approved as a concurrent enrollment course, high school administrators and faculty are responsible for identifying qualified students which may enroll in the concurrent enrollment courses. Criteria identified in the State Board of Regents policy and procedures should be considered in the selection process. This criteria includes senior standing, a grade point average and ACT score which predict success, and supportive letters of recommendation. (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997, p 6). Even though these guidelines

specifically mention senior status, some juniors are admitted to concurrent enrollment courses (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997, p 6). The high school has the primary responsibility to identify students who are eligible to participate in the concurrent enrollment program. The primary consideration shall be that students should be selected based on criteria selective enough to predict a successful experience for the student.

When concurrent enrollment courses are approved, concurrent enrollment courses are listed with regular high school course offerings in the high school. Arranging high school credit for concurrent enrollment courses is the responsibility of the high school. Students who have questions about what courses are being offered by a given high school should contact the high school concurrent enrollment coordinator (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997).

In order to ensure that students and parents are aware that concurrent enrollment students will be expected to perform to the standard of college level students, Salt Lake Community College encourages those teaching concurrent enrollment courses to require all students and parents to sign a Memorandum of Understanding. This form identifies the course as a college-level course with college credit. Students participating in concurrent enrollment courses should understand that college-level classes demand the responsibility and maturity proportional to a college-level student. Course content in concurrent enrollment courses will be appropriate for college-level students. Assignments, tests, and

grading will be consistent with equivalent courses taught on the college campus. Students should understand that concurrent enrollment courses appear on a college transcript and that dropping or withdrawing from a class is the responsibility of the student (Salt Lake Community College Concurrent Enrollment Handbook, Fifth Edition, 1997, p 12-13).

Other studies of concurrent enrollment programs

Information in this section is a result of a review of dissertation abstracts contained in the Harold B. Lee Library at Brigham Young University from 1990 through 1996 for the topics concurrent enrollment, dual credit, and dual enrollment. Other information was a result of an on-line search of dissertations abstracts online for concurrent enrollment and dual enrollment.

This information meets two purposes. First, it provides summary information about research in areas related to concurrent enrollment. Second, it helps to verify that the research completed in this study has not previously been done. This information includes different aspects of concurrent enrollment programs in the State of Utah and outside the State of Utah.

Harkins (1998) identified the three types of concurrent enrollment programs in terms of where students attend classes and whether or not college professors teach the classes. She described the three types as follows: In Type I concurrent enrollment programs students go to the college campus to take classes taught by college professors. In Type II programs college professors go to the high schools to teach the classes. In Type III concurrent enrollment

programs college courses are taught at the high schools by qualified high school teachers. Salt Lake Community College's concurrent enrollment program is a Type III program.

Harkins stated that although information about the general topic of school/college programs is accessible, little collective information about Type III programs, specifically, exists. In her study, Harkins stated that collectively, Type III concurrent enrollment partnerships are offered at a fraction of the normal college tuition and are taught by highly qualified high school teachers. Salt Lake Community College's concurrent enrollment program is in line with these findings.

Harkins also stated that the purposes of partnerships are to provide challenging curriculum, improve high school and college articulation, and provide an early college experience for high school students. However, Harkins provided no information about accelerated learning benefits or cost savings. Her findings are consistent with other literature reviewed.

Hirpa (1993) investigated the relationship of the Utah State University concurrent enrollment program to the achievement (GPA), recruitment, and retention of program participants after attending Utah State University. This study identified three administrative approaches to the management of concurrent enrollment programs. Level One involved high school teachers who taught and graded concurrent enrollment courses. Level Two required high school teachers to teach the concurrent enrollment courses, but University professors prepared

exams and graded papers. In Level Three University professors taught the concurrent enrollment courses, prepared and graded exams, and graded papers.

Hirpa's study suggests that the participants of Level One concurrent enrollment programs compared favorably with the participants of Levels Two and Three programs. This study recommended that the Level One approach to concurrent enrollment programs be supported with the emphasis on encouraging more high school teachers to teach concurrent enrollment courses in the future.

According to Hirpa's definitions of Level One, Level Two, and Level Three, Salt Lake Community College's concurrent enrollment program falls into the Level One category where high school faculty taught and graded the concurrent enrollment courses. At Salt Lake Community College high school teachers teaching concurrent enrollment courses are required to use college syllabi, text books, and exams.

Wright (1996) published a descriptive summary of Utah's early high school graduates with the aim of determining the extent to which the program prepares participating students with an adequate foundation for future endeavors when compared to traditional graduates. Wright's study provided the following results: (a) Students of all achievement levels participate in the early graduation option. Average achieving students represent the highest percentage of participants. (b) Early graduates earn fewer credits than do traditional graduates. Credits earned in basic-level courses are virtually equal, but traditional graduates earn more credits in middle- and advanced-level courses. (c) Early graduates

earn fewer credits in subjects classified as "new Basics" in A Nation At Risk than do traditional students.

Generally, Wright's study suggests that the level of preparation of Utah's early graduates appears to compare favorably with that of traditional students. The one area of concern centered around the number of middle- and advanced-level classes taken by early graduates. Included in this concern were the number of math and science courses completed by early graduates.

Ungricht (1997) completed a study which identified the relationship between learning strategies and demographic and educational performance variables and explored patterns of learning of distinct clusters that existed in the sample of high school students taking concurrent enrollment courses at Utah Valley State College. The multivariate technique of cluster analysis identified five distinct clusters. The Total Physical Response Learner is interested in meaningful and in-depth learning. The Matrix Learner learns best in group settings. The Strategic Learner likes to be given a direction then follows it strictly. The Sequential Learner is able to organize his or her learning and focuses on details. The Creative Learner uses higher order thinking skills to approach learning.

Ungricht provides two major conclusions in his study. First, distinct groups of learners exist among young adult learners. Second, learning strategies are linked to specific educational performance measures. He further recommended additional research.

Donahue (1993) discussed concurrent enrollment as a strategy used by educational entities to attempt to eliminate barriers between educational levels and provide for a seamless education. His study suggested that performance of concurrently enrolled high school students at a non-selective community college is similar to the native population. The data indicated that there is a strong relationship between high school GPA prior to concurrent enrollment and college GPA. His results also suggested that there is little relationship between achievement test scores and overall college GPA. Donahue suggested that concurrent enrollment students attended a non-selective community college for a number of reasons.

Salt Lake Community College is considered a non-selective community college. The study recently completed by the concurrent enrollment department at Salt Lake Community College also suggests that concurrent enrollment students attend a community college for a number of reasons. This information is included in chapter four of this study.

Crooks (1998) performed a policy study investigating state-enhanced college-level learning opportunities for secondary students. Her study included surveying State Higher Education Executive Officers and conducting case studies of Minnesota, Utah and Virginia. This study was designed to learn the extent of college-level learning in high school and the patterns and purposes of state policies to encourage students to begin college during the high school years.

This study suggests that state enhanced college-level learning is delivered using three different models: (1) the College Board's Advanced Placement program, (2) dual enrollment whereby the student is taking college courses taught by college faculty, and (3) credit validation that allows certified high school instructors to teach college courses in the high schools. Using these definitions Salt Lake Community College's concurrent enrollment program is included in model three: credit validation.

In 1995-96, a total of 728,327 secondary students pursued college-level learning, 523,537 through Advanced Placement and 204,790 in dual enrollment and credit validation programs. Dual enrollment and Advanced Placement opportunities were available in all states while credit validation was practiced in 23 states.

Crooks identified a variety of funding configurations. Dual enrollment instructional costs were most often paid for by parents and students via tuition (33 states). States also funded a share of these instructional expenses through college FTE-aid (20 states), redirected base-aid (18 states), and special state appropriations (2 states). Colleges assumed these costs in 10 states.

For credit validation, instructional costs were recovered by tuition in 14 states. Parents and students absorbed all or part of the fees for Advanced Placement tests in 41 states, while school districts assumed extra teacher training expenses for most states.

Crooks also reported that state interest in college-level learning was found to be motivated most often by curricular improvement rationales (59 percent) and

second by the desire for cost savings (38 percent). State legislatures and higher education coordinating committees were the groups who most often initiated state policy. The most common legislative mechanisms were found to be regulations governing the acceptance of college-level learning credit and specific participation criteria.

Two aspects of Crooks study are particularly interesting. First, the second most common reason for state sponsorship of college-level learning is the desire for cost savings. Crooks did not identify whether cost savings were from the perspective of the state or the students, nor did she make any attempt to identify an approach to predict costs or savings for students or the state. This study looks at cost savings from the perspective of the student and the state.

Second, state policy was most often initiated by State legislatures and higher education coordinating committees. In the State of Utah the State Legislature created through state statute the concurrent enrollment program and mandated that the State Board of Regents and the State Board of Education work together to implement the state's concurrent enrollment program.

McConnaha (1996) reported that students who participated in dual enrollment as a form of acceleration were highly motivated. These students possessed positive attitudes and self concepts. Students who were self-influenced in their decision to take dual enrollment courses viewed the social impacts as positive. However, students who participated in dual enrollment because of the influence of others viewed the social impact as negative.

Mullin (1997) assessed the Minnesota Postsecondary Enrollment Options Program from the perception of past participants and their parents. Former participants and parents generally rated as positive the program's impact on students' educational development, self-confidence, preparation for postsecondary matriculation, study habits, graduation from high school, overall high school experience, relationships with peers, and relationships family members. Over 97 percent of participants and parents rated the value of participation in the program as excellent or good. These findings are generally consistent with the findings of Salt Lake Community College's concurrent enrollment department in a study completed and published in August 1999.

Mullin identified the benefits of participation most often reported as they eased transition from high school to college and greater academic challenge than available in high school. The concerns most often reported were missed high school activities and discriminatory treatment of participating students by high school personnel.

Kleinrock (1987) provided both a summative description of concurrent enrollment programs in the New York metropolitan area and proposals for the development of student services for these programs. His study focused on concurrent enrollment programs that allowed high school students to take college courses on the college campus with regular college students.

Kleinrock defines a number of proposals which address factors related to the development of concurrent enrollment programs including program planning and development of student services components specifically for high school

students. Other literature presented earlier in this chapter identified the importance of student services and especially academic advising beginning at the high school level.

This review of information suggests that a study similar to the current study has not been done. Thus, this study adds to the body of knowledge by providing information about cost savings to students who have participated in Salt Lake Community College's concurrent enrollment program and to the State of Utah, and it provides a model that can be used for calculating cost savings in the future to students at Salt Lake Community College, potentially to other public higher education institutions throughout the state, and to the State of Utah.

CHAPTER THREE

Methods and procedures

Chapter three discusses the methods and procedures used in this study. Since the purpose of this study is to evaluate potential cost savings received by participating students and the State of Utah as a result of the concurrent enrollment program at Salt Lake Community College, program evaluation is the general approach selected for this study, with cost-benefit analysis the specific type of program evaluation. Chelimsky (1997) identifies fours reasons why program evaluations are generally performed: 1) program improvement, 2) accountability, 3) knowledge generation, and 4) political ruses or public relations. Program evaluations may satisfy one or more of the four reasons. The results of this study may have an impact on program improvement, accountability, knowledge generation, and public relations.

Within the context of cost-benefit study, this chapter discusses the general categories of program evaluation, research design, data collection, and reliability of data.

Program evaluation

According to Rossi (1999), "Program evaluation is the use of social research methods to systematically investigate the effectiveness of social intervention programs" (p. 35). The concurrent enrollment program is a social intervention program in that it attempts to provide an opportunity for high school students to participate in an accelerated learning program.

Program evaluation generally involves assessment of one or more of five domains of social programs. These five program domains are: 1) the need for the program, 2) the design of the program, 3) the program implementation and service delivery, 4) the program impact or outcomes, and 5) program efficiency, also called program effectiveness (Rossi, 1999, p. 22). Program efficiency attempts to determine if program effects are attained at a reasonable cost (Pancer, 1989). Program efficiency is the program domain this study is concerned with.

Each of the five program domains address specific aspects of social programs and their evaluation. Each program domain also includes certain types of evaluation questions and methods. Rossi provides additional information about types of evaluation questions and evaluation methods. Evaluation question types follow the five program domains. Common evaluation methods correspond to the types of evaluation questions.

Efficiency assessment evaluation methods and techniques are found in two closely related approaches: cost-benefit analyses and cost-effectiveness analyses. Cost-benefit analysis studies the relationship between program costs and outcomes, with both costs and outcomes expressed in monetary terms. Cost-effectiveness analysis examines the relationship between program costs and outcomes in terms of the costs per unit of outcome achieved (Rossi, 1999).

Based on this information provided by Rossi, this study more specifically falls into the category of cost-benefit analysis. Program costs and outcomes in the form of potential savings to the State of Utah and participating students are

determined for the concurrent enrollment program at Salt Lake Community College and presented in this study.

Rossi (1999) notes that cost-benefit analyses and cost-efficiency analyses are often essential for decisions about allocation of resources to programs (p. 73). This statement is consistent with statements in Chapter One.

Research design

As previously stated, cost benefit analysis studies the relationships between program costs and outcomes, with both costs and outcomes expressed in monetary terms (Rossi, 1999, p. 73). In this study program costs and outcomes, or benefits, to the State of Utah and participating students of Salt Lake Community College's concurrent enrollment program are identified.

A comparison of program costs and benefits is used to determine the extent of potential cost savings to the State of Utah and to participating students. Costs studied include State funding to support concurrent enrollment, State funding to support Salt Lake Community College students who enrolled in regular college-credit courses, and tuition costs to students who enrolled in regular college-credit courses.

Benefits include determining the extent of potential savings to the State of Utah through funding reductions realized as a result of Salt Lake Community College's concurrent enrollment program and to participating students through reduced tuition costs. Savings received by the State of Utah and participating

students increase as courses count toward an associates degree and decrease when courses do not count toward a degree.

Important to the calculation of costs and savings in this study is an understanding of the different costs which could be incurred by the State of Utah and by students. For every annualized full-time equivalent student who enrolled in concurrent enrollment courses the State of Utah paid to the high school through the school district the amount of $1,500. For regular college-credit courses, the State of Utah paid Salt Lake Community College the amount of $2,800 for every annualized full-time equivalent student. If concurrent enrollment courses counted toward an associates degree, the effect was to reduce on-campus regular college courses. This also reduced the amount paid by the State of Utah by $1,300 for every annualized full-time equivalent student ($2,800 - $1,500).

When concurrent enrollment courses count toward an associates degree the State of Utah could potentially save $1,300 for every annualized full-time equivalent student. However, if concurrent enrollment courses do not count toward an associates degree the State of Utah pays an extra $1,500 for every annualized full-time equivalent student. Ideally, every concurrent enrollment course successfully completed counts toward a college degree and decreases the amount paid by the State of Utah.

The Weighted Pupil Unit paid to the high school is not a factor in these calculations since the WPU is paid for all courses which generate high school credit whether or not they are concurrent enrollment courses.

If all concurrent enrollment courses counted toward graduation, the State of Utah saved $1,300 per annualized full-time equivalent student. Student benefits were maximized. If no concurrent enrollment courses counted toward graduation, each annualized full time equivalent student cost Utah an extra $1,500. When no concurrent enrollment courses counted, students receive no cost-savings.

Since students do not pay tuition for concurrent enrollment courses, they receive savings through reduced tuition costs as concurrent enrollment courses count toward an associates degree. For concurrent enrollment courses that do not count toward an associates degree, students receive no cost savings for these concurrent enrollment courses.

The break-even point is a point at which State of Utah neither saved nor paid additional funding to either higher education institutions or high schools for annualized full-time equivalent concurrent enrollment students. Expected student benefits were assumed to be somewhere between no savings and maximum savings.

Using information from Salt Lake Community College's student information system, three categories of calculations were performed and analyzed. First, the break-even point which is on the continuum from -$1,500 to $1,300 was calculated. The break-even point is expressed as a ratio of concurrent enrollment courses that counted toward graduation to concurrent enrollment courses that did not count toward graduation. This ratio represented the condition where the State of Utah realized neither additional costs or savings.

Second, after the break-even point was calculated, data were gathered about every student who graduated from Salt Lake Community College during the 1997-1998, 1998-99 and 1999-2000 academic years and completed at least one current enrollment course. Each student's academic record was used to determine the student's major, the concurrent enrollment courses completed, and whether or not each successfully completed concurrent enrollment course counted toward graduation. A ratio of concurrent enrollment courses that counted toward graduation as compared to concurrent enrollment courses that did not count toward graduation was calculated. The sum of these ratios was compared to the break-even point to determine if Salt Lake Community College's concurrent enrollment costs or saves the State of Utah funding.

Third, individual student ratios were analyzed to determine the impact of the concurrent enrollment program on the student's progress toward completion of a college degree. An "average ratio" for all students included in the study was calculated.

The results of these calculations suggest whether or not the State of Utah is fiscally better or worse off because of the concurrent enrollment program by comparing the "average student" to the break-even point. Additionally, individual student ratios provided a "picture" of the concurrent enrollment program's success in helping students to progress through their college experience to receiving their college degree.

In its present form, data on the student Information system identify individual courses taken by each student, but no attempt has ever been made to

specifically extract and study concurrent enrollment information as it relates to program costs and benefits. No study has been conducted that determines the impact of Salt Lake Community College's concurrent enrollment program.

Data collection

The collection of data in this study focused on enrollment information of students participating in Salt Lake Community College's concurrent enrollment program. The data collected included student enrollment information, student tuition and fees for the academic year being studied, course completion information, and graduation information.

Admissions, concurrent enrollment, graduation, and regular college course enrollment information are available through the college's computerized Student Information System. This information is stored on the college's computer system as raw data. Extracts of the raw data were grouped and summarized by individual students. However, once the data are grouped and summarized, all references which could possibly identify specific individuals have been removed from the data. No data element exists in the data reported in the study which could be linked to any student. Name, social security number or any other information which could be used to identify any individual have not been used in the study. This information has been compared to the break-even point to determine if the State of Utah saved funding or not. It was used to calculate the ratio of concurrent enrollment courses that counted toward graduation from Salt Lake Community College to those concurrent enrollment courses that did not

count toward graduation and to calculate the "average ratio" for all students included in this study.

Salt Lake Community College's General Catalog provided information about tuition and fees for regular credit courses. Tuition and fees information was used to determine costs to students who took regular college courses.

Reliability of data

Data from Salt Lake Community College's student information system and the college's General Catalog have been identified as sources for information required to address the research questions posed in this study. Determining the reliability of this data is part of the research process (Merriam, 1998, p. 121).

Data from Salt Lake Community College's student information system used in this study originated in the high schools. High school faculty teaching concurrent enrollment courses prepared grade sheets and submitted them through the college's concurrent enrollment office to student services for entry onto the student information system. Prior to the information being entered on the computer system, it was reviewed by the submitting faculty member for accuracy and signed. Generally, the grades were entered on computer-readable forms and read directly onto the computer. This information identified the courses successfully completed and the grade earned in the concurrent enrollment course.

By using this approach, information relating to courses completed and grades are more likely to be accurate and timely. Information submitted by high

school faculty teaching concurrent enrollment courses and stored on the student information system was considered reliable for the purposes of this study.

Concurrent enrollment courses taken and grades for the concurrent enrollment courses have been included in the college's student information system. Grades are important to the study since only courses successfully completed have an impact on progression toward a degree at Salt Lake Community College. Knowing which concurrent enrollment courses have been successfully completed and whether or not these courses count as a general education requirement, a major program requirement, or a program elective is important as impact of the course on the progress toward completing a college degree at Salt Lake Community College is studied.

Information used in this study was a product of Salt Lake Community College's concurrent enrollment processes and addresses the research questions. As such, the information is considered relevant to the study. Salt Lake Community College's General Catalog has been produced by Salt Lake Community College to be an official publication and is also considered reliable by the researcher.

CHAPTER FOUR

Understanding the context of the study

Information presented in chapter four provides an understanding of the context of the study. Included in this chapter is information from a report prepared by the Concurrent Enrollment department at Salt Lake Community College titled Salt Lake Community College's Concurrent Enrollment Program Reports 1999. This report includes enrollment information about the concurrent enrollment program, student perceptions of concurrent enrollment courses, students' post-high school plans including where students plan to attend college, and other similar information. Gender and race/ethnicity data is also provided about students enrolled in concurrent enrollment courses.

The first edition of the report titled Salt Lake Community College's Concurrent Enrollment Program Reports 1999 was produced and published in August 1999 in accordance with the college's mission statement and accountability policy and is the most comprehensive report produced to date about concurrent enrollment at Salt Lake Community College. It is also the only report produced by the Concurrent Enrollment department to date which includes information about student perspectives of the concurrent enrollment program, plans for additional education beyond high school, and the impact of the concurrent enrollment program on students.

Additional information in this section comes from Salt Lake Community College's mission statement, statement of values, college goals, college organizational structure, and a dissertation titled Policy Evaluation of Concurrent

Enrollment in Utah by Paul S. Sagers Jr., which was completed in February 2000 at the University of Utah.

Understanding this information about students enrolled in Salt Lake Community College's concurrent enrollment program adds meaning to the financial data presented in chapter five and provides a contextual understanding of Salt Lake Community College's concurrent enrollment program, which is the largest concurrent enrollment program in the State of Utah.

Contextualizing of Salt Lake Community College's concurrent enrollment program is important because situations may exist which impact total costs or savings realized by the State of Utah. For example, the cost of the concurrent enrollment program to the State of Utah is impacted when a student enrolls in concurrent enrollment courses offered through Salt Lake Community College and then attends a college or university out of state. Even though the impact of this and other situations on the costs to the State of Utah's concurrent enrollment program is not known, understanding that these situations exist adds to the value of this study.

Mission statement, values and goals

Our Mission Is Education

Salt Lake Community College is a multi-campus, comprehensive institution serving a diverse population through lifelong education. Our mission focuses on student needs in an open-door setting. We are committed to:

Vocational and Technical Education resulting in marketable job skills in a changing world,

General Education and pre-professional programs for transfer to other colleges and universities,

Adult and Continuing Education in cooperation with business and industry to enrich the opportunities of citizens,

Developmental Education designed to support students making a special transition to college life,

Community Service Education providing services and activities that promote community involvement,

and

to **student services** which support education and promote responsible choices through college-wide programs and activities.

Salt Lake Community College Values Statement

We, the faculty, staff and students of Salt Lake Community College applaud and reaffirm our comprehensive community college mission. Our business is teaching and learning. We are committed to building our community through vocational/applied technology education, developmental education, transfer education, community education, strong student support, lifelong learning, and business and economic development.

College Values

Students are our highest priority.
In harmony with this priority we declare our values:

Community: We value community involvement and economic development.

Creativity: We value creativity, innovation and responsible risk-taking.

Diversity: We value personal, cultural and ethnic diversity.

Environment: We value an accessible, safe, clean and aesthetically pleasing environment.

Excellence: We value quality education and professional excellence.

Expression: We value responsible personal, academic and expressive freedom without harassment, intimidation, or other destructive behaviors.

Integrity: We value integrity, responsibility, honesty and ethical conduct.

People: We value each student, faculty and staff member and believe that all should be treated with care, equity, respect and empathy. We value opportunity for growth, recognition and reward.

College Goals

Salt Lake Community College is committed to ongoing institutional planning and the establishment and pursuit of specific goals. As the faculty and staff of SLCC, our mission is education, with students as our highest priority. To accomplish this mission, we declare the following Goals Into the Future to increase institutional effectiveness:

Education and Training
We develop opportunities, make decisions and act to enhance the intellectual, physical and social pursuits which address the student's present circumstances. These efforts prepare individuals to live, work and grow in today's diverse, complex and technologically driven global society.

Fiscal Responsibility
We use College resources, including facilities, equipment, budgets and personnel, in a responsible and cost-effective manner. This includes sharing these resources and working cooperatively across organizational lines, while considering the needs of students.

Quality Service
We provide excellent service to everyone, both internally and externally, through efforts to encourage and increase diversity and cultural awareness. Also, we recruit and retain students, faculty and staff with fair, honest and nurturing treatment. In addition, we strive

for cooperation, trust and unity and we embrace open, honest communication.

College Organization

Salt Lake Community College's organization includes three vice presidents who report to the President. The Vice President of Business Services is responsible for all business-related functions at the College. The Vice President of Student Services is responsible for all student services related functions. The Vice President of Academic Services is responsible for all academic matters at Salt Lake Community College.

In the academic services area, Salt Lake Community College includes four schools, each under the direction of a Dean. The School of Business and Industry includes traditional business programs such as accounting, finance, management, and marketing. Other programs include Computer Information Systems, Business Information Technology, and Manufacturing and Automation Technologies.

The School of Humanities and Sciences includes general education courses and other closely related courses intended to be the core transfer courses. Fine Arts, Social Sciences, Physical Sciences, Humanities, Languages, Mathematics, and Pre-engineering programs are included in this school.

The School of Technology consists primarily of the college's vocational/ technical programs. Included in these programs are Building Construction, Barbering and Cosmetology, Automotive, Visual Art & Design, Non-destructive Testing, Heavy-duty Mechanics, Avionics, and Welding.

The School of Continuing and Community Education includes the college's programs which relate more closely to the community. These programs include Developmental Education, the Learning Center, the University Center, Workplace Education, the Institute of Public Safety, the Advanced Technology Center, Distance Education, Custom-fit Training, Short-term Intensive Training, Program Innovation, and Workshops and Conferences.

The Dean of each School reports to the Vice President of Academic Services. Division Chairs and Directors are responsible for individual programs or groups of programs and report to the Dean of their respective Schools. Faculty members serve as Department Coordinators and work with the faculty in each department. Department Coordinators and all full-time and adjunct faculty report directly to a Division Chair or Director. Generally, Division Chairs are responsible for programs in the Schools of Business and Industry, Humanities and Sciences, and Technology. Directors are responsible for programs in the School of Continuing and Community Education.

In the concurrent enrollment program, course proposals originate in each high school and are requested by high school faculty. Course proposals flow from the high school through the school district to Salt Lake Community College. At the College the concurrent enrollment office collects and then distributes the concurrent enrollment proposals to the appropriate division chair for consideration. Division chairs work with the department coordinators as each concurrent enrollment course proposal is considered for approval and as a full-

time faculty member is assigned to be a liaison for each concurrent enrollment course.

Concurrent Enrollment Program Report

Concurrent enrollment growth since 1989

Salt Lake Community College has offered concurrent enrollment courses since 1989. These courses have been offered to Granite, Jordan, Murray, Salt Lake City and Tooele school districts. A limited number of concurrent enrollment courses are offered through the Davis School District under a "right of first refusal" from Weber State University. Student enrollment has grown from 758 in 1989 to 11,560 in 1998-99. Table 2 below identifies this growth.

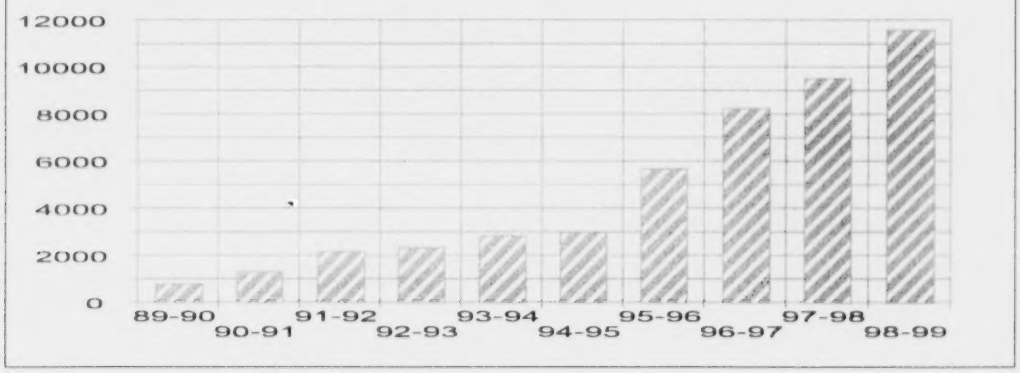
Table 2
Concurrent Enrollment Growth

Academic Year	Enrollments
1989-90	758
1990-91	1,283
1991-92	2,135
1992-93	2,299
1993-94	2,822
1994-95	2,953
1995-96	5,639
1996-97	8,215
1997-98	9,493
1998-99	11,560

Source: Concurrent Enrollment Program Reports 1999

The following graph gives a pictorial representation of this growth between 1989 and 1999.

Figure 1
Growth of Concurrent Enrollment Since 1989

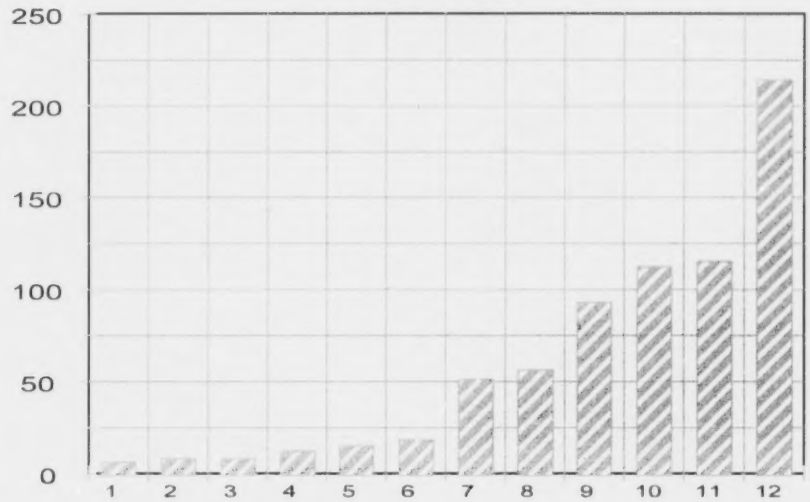


Course Offerings - 1999 by Division

Not only has the concurrent enrollment program experienced steady growth since 1989, but participation now includes every division at Salt Lake Community College. Enrollment in concurrent enrollment programs ranges from approximately six sections in the Electro-Mechanical Technology Division to approximately 214 sections in the Technical Specialities Division.

The following graph lists each division at Salt Lake Community College that offers concurrent enrollment courses and identifies the total number of sections offered. Divisions are listed in order from the fewest number of concurrent enrollment sections to the most sections offered. A complete listing of courses offered through concurrent enrollment by division is included with the Concurrent Enrollment Program Reports 1999 in Appendix B.

Figure 2
Number of Concurrent Enrollment Courses Offered by Division



Legend:

1 Electro-mechanical Technology
2 Mechanical Technology
3 Fine Arts and Social Sciences
4 Apprenticeship
5 Natural Science & Communication
6 Health Sciences
7 Business Administration
8 Continuing Education
9 Humanities
10 Computational Science & Education
11 Information and Industry
12 Technical Specialities

Survey of Concurrent Enrollment Students

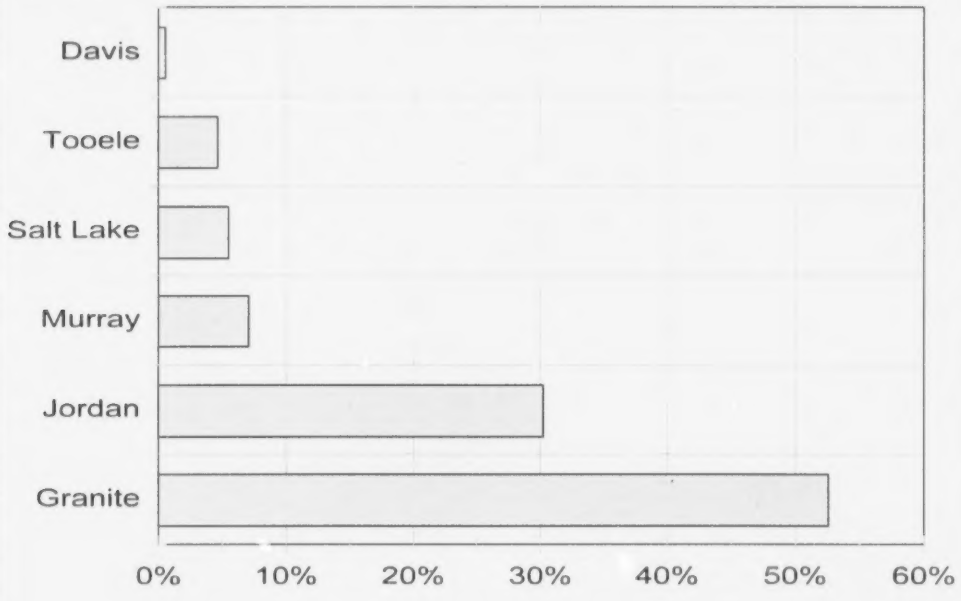
As reported in Salt Lake Community College's Concurrent Enrollment Program Reports 1999, Salt Lake Community College registered 4,817 students in concurrent enrollment courses in Spring Semester, 1999. The college's Concurrent Enrollment department surveyed 604 students. A stratified random sampling method was used to administer the questionnaire and gather

information. The procedure for conducting the sample is described in detail on page 7 of the Concurrent Enrollment Program Reports 1999. See Appendix B.

Students from the five school districts in Salt Lake Community College's service region and from Davis School District participated in the study. Davis School District students participated in the survey since they enrolled in concurrent enrollment courses offered through Salt Lake Community College. Courses were offered to Davis School District students under a Right of First Refusal agreement with Weber State University, the Davis School District and Salt Lake Community College. Student responses to the questionnaire are presented in the following pages.

The graph presented below identifies the percentage of students who participated in the survey by school district. The graph shows that Granite School District had more than half of all students who participated in the survey. Jordan School District was next in percentage of participating students. Davis School District had less than 1 percent of students who participated in the survey.

Figure 3
Participation in the Concurrent Enrollment Survey Percentage by District



As indicated by this graph, students participating in the survey from Granite and Jordan School Districts comprise more than 80 percent of the total participants. These percentages are a reasonable representation of percentages of students from each of the school districts who participate in concurrent enrollment courses offered through Salt Lake Community College.

Plans after high school graduation

The survey asked students to identify one or two options that best describe their plans for the first six months and the first year after high school graduation. Some of the activities identified in the survey are not mutually

exclusive. For example, working and attending school could be part of a student's plan and could be selected as two options. In other situations only one option may be selected, such as serve a religious mission.

Percentages illustrated in Figure 4 identify percentages of students who selected the indicated option. Because students were allowed to select up to two options for six-month plans and one-year plans, and some options were not mutually exclusive, the total percentages for six-month plans and one-year plans may total more than 100 percent.

Figure 4
Plans Six Months & One Year After Graduation

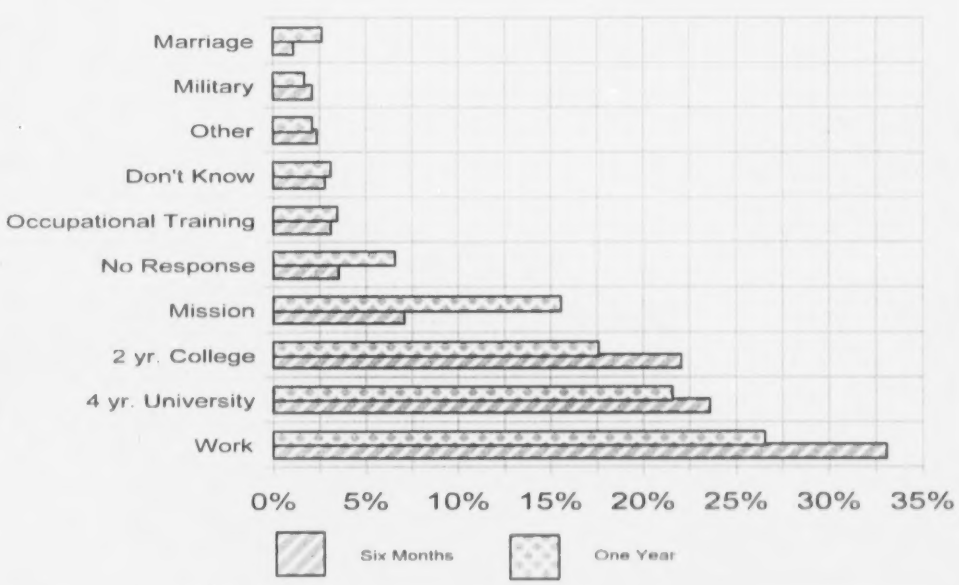


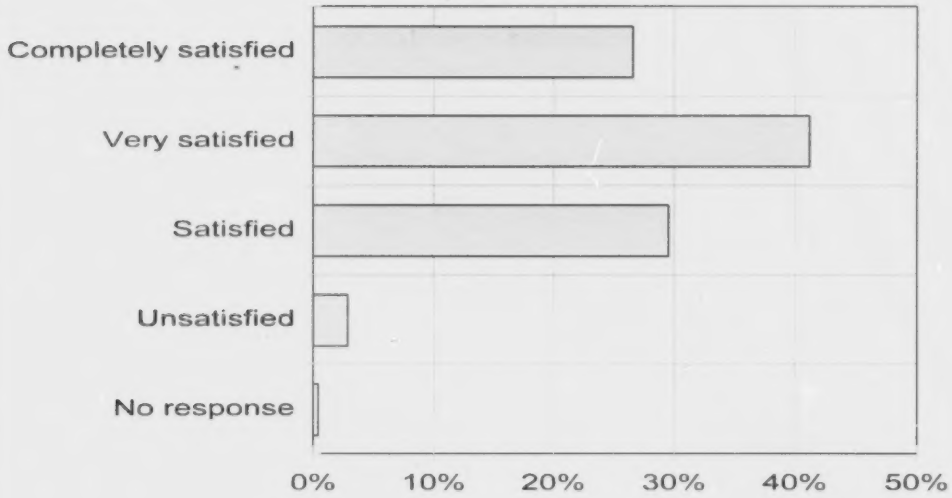
Figure 4 suggests that approximately 33 percent of those surveyed planned to work in the next six months, but the percentage of those who

intended to be working in one year drops to about 27 percent. Students who planned to attend a 4-year university in the next six months approaches 24 percent, but this percentage drops to about 22 when the students projected out one year. Twenty-two percent of the students who responded planned to attend a 2-year college six months after high school graduation. This percentage dropped to approximately 17.5 percent after one year. The category with the largest gain in percentage from six months to one year is the group who planned to serve a religious mission.

Student satisfaction with concurrent enrollment

Students were asked in the survey to identify their level of satisfaction with concurrent enrollment courses. Choices given in the survey ranged from unsatisfied to very satisfied. Approximately two-thirds of all surveyed students responded that they were either Completely Satisfied or Very Satisfied with the concurrent enrollment courses they had taken. Less than 5 percent of students responded that they were unsatisfied with the concurrent enrollment courses, and less than 1 percent did not respond. Figure 5 presents the findings of the survey.

Figure 5
Student Perceptions of Concurrent Enrollment Courses
Percentage by Category

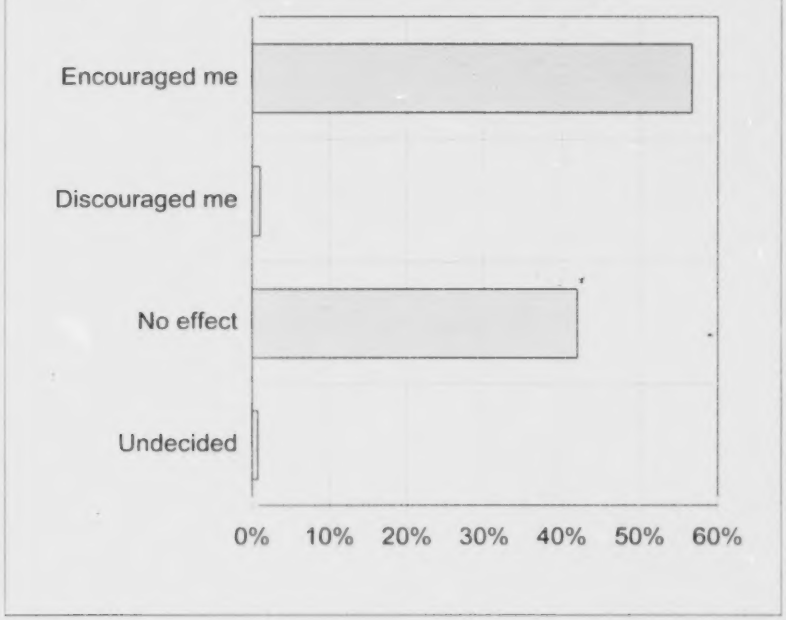


Concurrent enrollment influence on students' decision to attend college

Students were asked in the survey how their experience in concurrent enrollment courses affected their decision to attend college. Approximately 56 percent of all students reported that the concurrent enrollment courses they had taken had a positive influence on their decision to attend college. The second largest category of students (41 percent) stated that concurrent enrollment courses had no effect on their decision to attend college.

The students who indicated that concurrent enrollment courses had no effect on their plans may have decided prior to taking any concurrent enrollment courses whether or not they were going to college, and concurrent enrollment courses had no impact on that previously-made decision. Figure 6 presents this information.

Figure 6
How Concurrent Enrollment Affected
Your Decision To Attend College



Schools students plan to attend after high school graduation

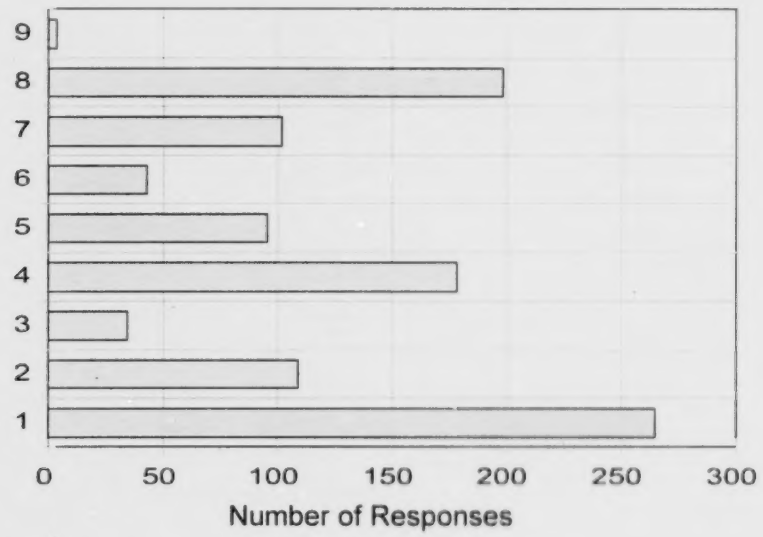
Students were asked in the survey which college or university they planned to attend after high school graduation. Students were allowed to select more than one college or university in response to this question, and many students did select more than one school. For this reason the total number of responses is significantly greater than the sample size of 604.

As shown in Figure 7, though this survey consisted of students taking concurrent enrollment courses through Salt Lake Community College, more students planned to attend the University of Utah than any other single institution identified in the survey. However, the students who planned to attend the

University of Utah may attend a two-year college prior to attending the University of Utah. Out-of-state universities received the second largest number of responses, and Salt Lake Community received the third largest number of responses.

Care must be taken when interpreting the graph in Figure 7. The graph is not intended to suggest that students will attend only one college or university during their entire educational career. Some students may be planning to attend more than one institution. For example, a student may plan to begin his or her post-secondary education at Salt Lake Community College and then transfer to the University of Utah. In this scenario, the student should select both Salt Lake Community College and the University of Utah. Figure 8 supports this interpretation.

Figure 7
Schools Students Plan To Attend
In Their Post-high School Education



Legend:

1 University of Utah
2 Utah State University
3 Weber State University
4 Salt Lake Community College
5 Brigham Young University
6 Southern Utah University
7 Other Utah Universities
8 Out-of-state Universities
9 No response

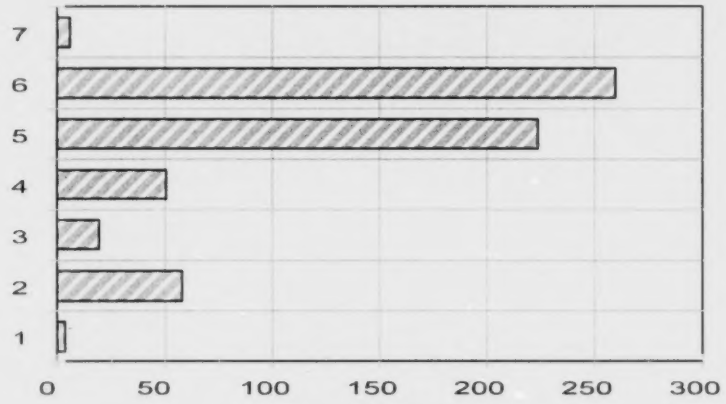
Students' plans while attending a college or university

According to the information presented in Figure 8, a large number of students planned to begin at a university to earn a bachelor's degree. The category which received the second greatest number of responses suggests that the number of students who planned to attend a community college and then transfer to a university is nearly as large as the number of students who planned to go directly to a four-year university. In fact, the total number of students who planned to attend a university to earn a bachelor's degree or attend a community

college and then transfer to a university is larger than all other categories combined.

Students included in categories three, four, and five of Figure 8 planned to begin their post-secondary education at a community or vocational college either for a certificate or an associates degree and then move on to employment or to earn an associates degree then transfer to a four-year university. This suggests that the total number of students who planned to attend a two-year college after high school graduation is greater than the number of students who planned to go directly to a four-year university.

Figure 8
Students' Plans For Attending
A College Or University



Legend

1 Do not plan to attend college
2 To attend school for a while, goal is undecided
3 To earn a certificate and then work
4 To earn an associate degree and then work
5 To attend community college and then transfer to a university
6 To begin at a university to earn a bachelor's degree
7 No response

Comparison of participation of students by gender

Student enrollments by gender presented by Sagers (2000) suggest that female students represent about 54 percent and male students represent about 46 percent of the participating population. In his study, Sagers calculated these percentages using data extracted from Salt Lake Community College's Student Information System. Even though enrollments have increased by more than 300 percent, the percentages have remained reasonably steady from the 1993-94 academic year through the 1997-98 academic year as evidenced in Table 3 below.

Table 3
Comparisons of Student Enrollment by Gender
In Concurrent Enrollment Classes

	1993-94		1994-95		1995-96		1996-97		1997-98	
Gender	No.	%	No.	%	No.	%	No.	%	No.	%
Male	684	45.6%	695	44.8%	1357	48.2%	2007	46.4%	2327	46.0%
Female	815	54.4%	857	55.2%	1459	51.8%	2320	53.6%	2756	54.0%
Total	1499	100%	1552	100%	2816	100%	4327	100%	5083	100%

Comparisons of "Race/Ethnicity"

Percentages of Caucasian students who enrolled in concurrent enrollment courses at Salt Lake Community College from the 1993-94 academic year through the 1997-98 academic year have remained reasonably constant and representative of state and district enrollment patterns over this time period

(Sagers, 2000). The only year that had a percentage of Caucasian students slightly higher was the 1993-94 academic year. In 1993-94 the Caucasian population accounted for 87.2 percent of the students enrolled in concurrent enrollment courses. The other four years Caucasian students accounted for 82.7 to 84.5 percent of the students.

Percentages of minority students showed slight variation from year to year. Hispanic students showed the greatest variation over the period of time studied with a range that varied by 1.1 percent. Determining the race/ethnicity of some students was not possible. These students were grouped in a category labeled 'Unknown.' This category showed the greatest variation with a range of 5.7 percent to 8.8 percent.

Sagers (2000) suggests that the data presented in Table 4 is consistent with state and district enrollments. Sagers also suggests that when these data were broken down by school district, the patterns of representativeness were consistent with the characteristics of student race/ethnicity within the respective districts. Table 4 presents this data.

Table 4 Percentage of Student Enrollments by Race/ethnicity In Concurrent Enrollment Classes					
Race	1993-94	1994-95	1995-96	1996-97	1997-98
1. 'Black'	0.3%	0.4%	0.3%	0.4%	0.4%
2. 'Pacific Islander'	0.1%	0.1%	0.5%	0.5%	0.6%
3. 'Hispanic'	3.0%	2.6%	3.4%	3.7%	3.7%
4. 'American Indian/ Alaskan Native'	0.5%	0.4%	0.5%	0.5%	0.8%
5. 'Asian'	3.3%	4.3%	3.6%	3.4%	3.6%
6. 'Puerto Rican (Mainland)'	0.0%	0.0%	0.0%	0.0%	0.0%
7. 'Unknown'	5.7%	8.4%	8.8%	8.0%	5.9%
8. 'White'	87.2%	83.7%	82.7%	83.2%	84.5%
9. 'Other'	0.0%	0.0%	0.3%	0.3%	0.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Sagers (2000) used information from Salt Lake Community College's Student Information System to determine which high schools were attended by those students in his study who completed at least one concurrent enrollment course. His study suggests that Granite, Murray, Jordan, Salt Lake, and Tooele school districts were represented. Table 5 identifies the school district, high school, and number of students who completed at least one concurrent enrollment course prior to high school graduation.

Table 5 Number of students taking concurrent enrollment courses by District and High School		
School District	High School	Number of Students
Granite	Cottonwood	29
	Cyprus	3
	Granger	17
	Hunter	3
	Kearns	5
	Olympus	5
	Skyline	6
	Taylorsville	10
Jordan	Alta	8
	Bingham	2
	Brighton	5
	Hillcrest	18
	Jordan	2
	West Jordan	1
	Jordan Technical Center	7
Murray	Murray	14
Salt Lake	East	2
	West	6
	Highland	4
Tooele	Tooele	6
S.L. Community College	Redwood Campus	5

In addition to presenting the number of students by district and high school who completed concurrent enrollment courses, Table 5 states that five students completed concurrent enrollment courses at the Redwood Campus of Salt Lake Community College.

Highlights of the context of the study

Information presented in this section suggests that the concurrent enrollment program has shown continued steady growth since its inception in 1989. The number of students who participate in concurrent enrollment courses has grown every year with 11,560 students participating during the 1998-99 academic year. It also provides information about the courses taken and the plans of students who are participating in the concurrent enrollment program.

In the 1998-99 academic year, the top three divisions offering concurrent enrollment courses were the Technical Specialities, Information and Industry, and Computational Science and Education divisions. The Technical Specialities division offered more than 200 concurrent enrollment courses, and the Information and Industry and Computational Science and Education divisions each offered more than 100 concurrent enrollment courses.

Students from Granite and Jordan school districts, two of the largest school districts in the State of Utah, comprise more than 80 percent of all concurrent enrollment courses offered at Salt Lake Community College. Granite School District offered more than 50 percent and Jordan School District offered more than 30 percent of all concurrent enrollment courses.

Not only are enrollments in concurrent enrollment courses increasing steadily, but students' plans after high school graduation are diverse. Plans include marriage, military service, occupational training, missionary service, attendance at a two-year college, attendance at a four-year college or university, and work.

Student perception of concurrent enrollment courses continues to be positive. More than 95 percent of student responses are in the satisfied, very satisfied, or completely satisfied categories. Less than 5 percent of students surveyed stated that they were unsatisfied or had no response. Not only were students positive about concurrent enrollment courses, more than 55 percent stated that concurrent enrollment courses had encouraged them to attend college after high school graduation.

Student responses in the area of enrollments in colleges and universities indicates that the in-state institution students are most likely to attend is the University of Utah. Salt Lake Community College was selected second to the University of Utah. Over 250 of the students included in the report stated that they planned to attend out-of-state institutions.

Attending a college or university to earn a bachelors degree was the desire of more than two-thirds of concurrent enrollment students. About 60 percent of those students who desire to earn a bachelors degree planned to go directly to the University of Utah. Attending Salt Lake Community College and then transferring to the University of Utah was the second most frequently chosen option.

Complex issues related to the concurrent enrollment program and students' plans after high school graduation combine to make calculating actual savings to the State of Utah and to students difficult at best; however, focusing on Salt Lake Community College graduates for a specific range of years may give an indication of potential savings for a majority of students participating in concurrent enrollment courses. Chapter five focuses on time and cost savings to students and the State of Utah.

CHAPTER FIVE

Findings related to time- and cost-savings

This chapter addresses the general research questions: To what extent does the concurrent enrollment program at Salt Lake Community College generate time- and cost-savings for students who successfully complete concurrent enrollment courses? To what extent does the concurrent enrollment program at Salt Lake Community College generate cost-savings to the State of Utah?

Findings related to time- and cost-savings generated in behalf of students who have graduated from Salt Lake Community College and successfully completed the college's concurrent enrollment courses are presented. Potential cost-savings generated in behalf of the State of Utah are also presented.

In order to answer the general research questions, specific steps were followed. These steps include the identification of participating students, an evaluation of concurrent enrollment courses successfully completed, an estimation of program costs and savings to participating students, the determination of a break-even point, a comparison of concurrent enrollment information to the break-even point, and a calculation of costs and savings to the State of Utah.

Costs and savings to students

As outlined in Salt Lake Community College's *Concurrent Enrollment Handbook* (Fifth Edition), students who wish to participate in concurrent enrollment courses must apply for admission to Salt Lake Community College using regular college admissions procedures. Students do this by completing a matriculated student admissions form. The cost associated with the admissions process is $20.00 and is paid by each student who plans to take concurrent enrollment courses as a matriculated student. Because this one-time-only fee applies to all students whether taking concurrent enrollment courses or regular college courses, this is not an extra cost for concurrent enrollment students and will not be included in these calculations. Students taking concurrent enrollment courses pay no other fees or tuition but may have to purchase textbooks.

The college requires instructors teaching concurrent enrollment courses to use the same textbooks in concurrent enrollment courses that are used in regular college courses taught on the college sites. Textbook costs are not included in the cost-savings calculation for two reasons. First, many of the high schools purchase the textbooks for students enrolled in concurrent enrollment courses. This benefit for students is at the discretion of each individual high school. Second, if high schools choose not to purchase text books for students enrolled in concurrent enrollment courses, students must purchase their personal copy of textbooks. Even though the practice is not consistent from high school to high school, students who buy their own textbooks do not incur additional costs

over students who are taking regular on-campus courses. For these reasons textbook costs are not part of the cost-savings calculation to students.

Since students taking concurrent enrollment courses are not required to pay college tuition for concurrent enrollment courses, the financial benefit to students is obvious and may be significant. The following table lists tuition costs for up to 18 credit hours. Tuition savings are determined by the number of credit hours taken each quarter or semester and the academic year concurrent enrollment courses were taken since tuition rates may change annually.

Table 6
Salt Lake Community College
Tuition Costs

Credit Hours	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998**	1999**
1	$75	$75	$77	$79	$80	$82	$80	$80	$88	$134.50	$138.50
2	$104	$105	$108	$112	$113	$117	$117	$117	$126	$194.00	$200.00
3	$134	$137	$141	$147	$148	$153	$154	$154	$164	$253.50	$261.00
4	$164	$168	$173	$181	$182	$188	$191	$191	$202	$313.00	$322.50
5	$194	$199	$205	$215	$216	$224	$228	$228	$240	$372.50	$383.50
6	$224	$230	$237	$249	$250	$259	$265	$265	$278	$432.00	$445.00
7	$251	$258	$267	$281	$282	$292	$302	$302	$316	$491.50	$506.00
8	$282	$291	$301	$317	$318	$329	$339	$339	$354	$551.00	$567.50
9	$310	$320	$331	$349	$350	$362	$376	$376	$392	$610.50	$629.00
10	$338	$349	$361	$381	$382	$395	$413	$413	$430	$670.00	$690.00
11	$351	$365	$382	$409	$410	$424	$450	$450	$468	$720.50	$742.00
12 - 18*	$363	$380	$400	$436	$453	$470	$482	$482	$501	$771.00	$794.00

* In the 1993-94 academic year tuition was changed to allow a range of credit hours to be considered for full-time status.

** Tuition increase reflects change from quarters to semesters.

Source: Salt Lake Community annual catalogs.

As an example, using Table 6 above, if a student only takes one 3-credit-hour course in 1995, the tuition savings for that quarter would be $154.00. If the same student takes a total of 10 credit hours in a second quarter, the tuition savings for the second quarter would be $413.00. Since total savings realized by each student are determined by calculating tuition savings for each quarter or semester and summing the savings amounts into one total amount, the total tuition savings realized by this student would be $154.00 plus $413.00, or $567.00.

The actual savings realized by each student who graduated in the 1997-1998, 1998-99 or 1999-2000 academic years and took at least one concurrent enrollment course is a function of the number of concurrent enrollment courses completed and the academic year in which the courses were completed.

Information presented in the following two tables is needed as approximated savings are calculated. Table 7 identifies the number of courses completed by year for each of the graduating classes included in the study. This information was gathered from the Student Information System at Salt Lake Community College.

Table 7 Academic year when concurrent enrollment courses completed			
Academic Year	Concurrent enrollment courses completed by 1997-1998 graduates	Concurrent enrollment courses completed by 1998-1999 graduates	Concurrent enrollment courses completed by 1999-2000 graduates
1990-91	28	5	4
1991-92	51	26	24
1992-93	76	45	43
1993-94	103	98	63
1994-95	83	93	75
1995-96	69	190	140
1996-97	12	145	183
1997-98	0	12	116
1998-99		0	35
1999-2000			5
Totals	422	614	688

This table identifies 1995-96 as the year that more concurrent enrollment courses were completed by those students who graduated in 1997-98, 1998-99 or 1999-2000 than other years. The table also suggests at least two interesting facts. First, students who graduated in each of these three graduating classes began taking concurrent enrollment courses during the 1990-91 academic year. The table indicates that four students who began taking concurrent enrollment courses during the 1990-91 academic year graduated from Salt Lake Community College in the 1999-2000 academic year. Second, five concurrent enrollment

courses were completed during the same academic year the students graduated (1999-2000 academic year).

Table 8 identifies the number of courses completed, an average number of credit hours completed, and an approximate savings for these courses. Tuition rates for 1995-96 were used for all tuition savings calculations presented in this table for two reasons. First, the greatest number of concurrent enrollment courses was taken in 1995-96 by students who are included in the study. Second, this year is approximately in the middle of the range of years in which concurrent enrollment courses were taken by the graduates in the study. Concurrent enrollment courses completed prior to 1995-96 generated less savings per credit hour and courses completed after 1995-96 generated more savings per credit hour.

In calculating approximate savings, a credit hour load of nine credit hours was used since this closely approximates the average number of credit hours taken by a typical student at Salt Lake Community College. Tuition amounts presented are based on nine credit- hours per quarter or semester rounded to the nearest whole number and 1995-96 tuition rates for reasons already stated.

Table 8 Number of concurrent enrollment courses completed by graduates each academic year and potential savings							
Number of courses	Number of students completing courses			Average credit hours completed			Average Approximate tuition savings*
	1997-1998	1998-1999	1999-2000	1997-1998	1998-1999	1999-2000	
1	65	77	88	4.33	4.39	4.36	$191
2	34	58	72	9.55	8.93	9.16	$362
3	19	21	38	13.73	13.86	14.09	$604
4	12	21	19	17.25	17.00	17.35	$715
5	10	12	10	21.30	20.50	21.11	$906
6	7	13	10	27.43	21.69	23.10	$1,017
7	5	6	11	25.40	28.67	26.55	$1,128
8	3	6	6	34.00	33.00	32.67	$1,393
9	1	1	3	35.00	45.00	35.33	$1,621
10	1	1	2	33.00	29.00	42.00	$1,430
11	1	0	1	45.00	50.00	47.00	$1,997
12	0	1	0	0	56.00	0	$2,373
15	0	1	0	0	55.00	0	$2,256
* Approximate tuition savings are calculated using tuition rates for 1995 and an average credit hour load of 9 hours.							

Table 8 shows that of the 158 students who graduated in 1997-98 and completed concurrent enrollment courses, sixty-five students completed one course with an average of 4.33 credit hours completed, thirty-four students completed two courses for an average of 9.55 credit hours, and so on.

The students who completed one concurrent enrollment course saved an average approximate amount of $191. Students who completed two courses

saved an average approximate amount of $376. The student who completed 55 concurrent enrollment credit hours saved approximately $2,256. Table 8 gives average approximate savings for students who completed the listed number of concurrent enrollment courses. Students who completed fewer courses received smaller savings amounts, and students who completed more concurrent enrollment courses received greater savings amounts.

Table 9 expands on information provided in Table 8 to provide total amounts saved by number of courses completed. It also suggests a total approximate savings amount received by students who graduated during 1997-98, 1998-99 and 1999-2000 and successfully completed at least one concurrent enrollment course.

Table 9 Approximate savings received by students who completed the specified number of courses						
Number of courses	Number of students completing courses				Average Approximate tuition savings*	Approximate Total Savings
	1997-1998	1998-1999	1999-2000	Total students		
1	65	77	88	230	$191	$43,930
2	34	58	72	164	$362	$59,368
3	19	21	38	78	$604	$47,112
4	12	21	19	52	$715	$37,180
5	10	12	10	32	$906	$28,992
6	7	13	10	30	$1,017	$30,510
7	5	6	11	22	$1,128	$24,816
8	3	6	6	15	$1,393	$20,895
9	1	1	3	5	$1,621	$8,105
10	1	1	2	4	$1,430	$5,720
11	1	0	1	2	$1,997	$3,994
12	0	1	0	1	$2,373	$2,373
15	0	1	0	1	$2,256	$2,256
Totals	158	218	260	636		$315,251
* Approximate tuition savings are calculated using tuition rates for 1995 and an average credit hour load of 9 hours.						

Table 9 suggests that those students who graduated in 1997-98, 1998-99 or 1999-2000 completed 636 concurrent enrollment courses and saved approximately $315,251. Savings for each student varied from $191 to $2,373. Students who completed one concurrent enrollment course saved an average of $191. Students who completed two concurrent enrollment courses saved an

average of $362. Savings are estimated based on the number of courses completed. Even though these amounts are approximate and are calculated using the assumptions previously described, they represent a significant tuition savings to students.

Not only is identifying student cost savings important, identifying time-savings is also important. Table 10 converts average credit hours completed in Table 8 into portions of quarters saved. Even though Salt Lake Community College has converted from quarters to semesters, quarters are projected in this table because the conversion did not take place until the 1998-99 academic year, and all courses completed prior to that year were quarter hours.

Table 10 indicates two different projected time savings. The first projected time savings is based on nine credit hours per quarter since this is the average credit hour load for all students taking courses at Salt Lake Community College. The second projected time savings is based on 15 credit hours per quarter since this is considered the standard full credit hour load. These two time savings projections will indicate the most likely possibilities for time savings to students.

Table 10
Projected time savings based on average credit hours completed

Number of concurrent enrollment courses completed (a)	Number of graduates completing specified number of concurrent enrollment courses (b)			Average credit hours for specified number of courses completed (c)			Approximate time savings to students in quarters	
	1997-1998	1998-1999	1999-2000	1997-1998	1998-1999	1999-2000	Time savings if 9 credit hours / quarter taken (d)	Time savings if 15 credit hours / quarter taken (e)
1	65	77	88	4.33	4.39	4.36	0.48	0.29
2	34	58	72	9.55	8.93	9.16	1.02	0.61
3	19	21	38	13.73	13.86	14.09	1.54	0.93
4	12	21	19	17.25	17.00	17.35	1.91	1.15
5	10	12	10	21.30	20.50	21.11	2.33	1.40
6	7	13	10	27.43	21.69	23.10	2.67	1.60
7	5	6	11	25.40	28.67	26.55	2.99	1.79
8	3	6	6	34.00	33.00	32.67	3.69	2.21
9	1	1	3	35.00	45.00	35.33	4.27	2.56
10	1	1	2	33.00	29.00	42.00	3.85	2.31
11	1	0	1	45.00	50.00	47.00	5.26	3.16
12	0	1	0	0	56.00	0	6.22	3.73
15	0	1	0	0	55.00	0	6.11	3.67

(b) Indicates by graduation year how many students completed number of concurrent enrollment courses specified in column (a).
(c) Represents by graduation year the total average number of concurrent enrollment credit hours completed for number of concurrent enrollment courses specified in column (a).
(d) Approximates time savings in quarters if students complete an average of 9 credit hours per quarter for their associates degree (average of numbers in column (c) divided by 9 credit hours).
(e) Approximate time savings in quarters if students complete an average of 15 credit hours per quarter for their associates degree (average of numbers in column (c) divided by 15 credit hours).

Table 10 uses average credit hours completed to calculate approximate time savings to students. Table 10 states that for a student who normally

registered for an average of 9 credit hours per quarter and completed one concurrent enrollment course, the student saved the equivalent of .48 quarters. For a student who normally registered for an average of 15 credit hours per quarter and completes one concurrent enrollment course, the student saved the equivalent of .29 quarters. For the student who normally registers for nine credit hours per quarter and completes 11 courses, the student saves 5.26 quarters.

Tables 9 and 10 indicate that cost and time savings to students who have successfully completed concurrent enrollment courses are significant. Savings to individual students vary based on the number of classes completed and when they were completed; however, total savings to all students taking concurrent enrollment courses is meaningful.

As an additional indication of time savings received by concurrent enrollment students a comparison of average credit hours completed by students participating in concurrent enrollment courses with students not participating is provided. This comparison is of the 158 students who graduated during the 1997-98 academic year with the other 1963 graduates who did not participate in concurrent enrollment courses.

Though this comparison is provided, care must be taken when considering this information for the following reasons.

- Prior to the conversion to semesters from quarters in the fall of 1998 associate degrees required from 96 to 120 credit hours.
- Associate degrees which transferred to 4-year colleges and universities generally required from 95 to 105 credit hours.

- Vocational associate degrees which prepare students for entry into the workforce required from 110 to 120 credit hours.
- Concurrent enrollment courses were primarily in the category of transfer courses.

	Graduates who completed concurrent enrollment courses	Graduates who did not complete concurrent enrollment courses
Number of graduates	158	1963
Total credit hours completed	16,676	260,749
Average credit hours taken	105.5	132.8

Students who graduated during the 1997-98 academic year and enrolled in concurrent enrollment courses completed an average of 105.5 credit hours leading to their associate degree. Students who did not enroll in concurrent enrollment courses completed an average of 132.8 credit hours for their associate degree.

Costs and potential savings to the State of Utah

As stated in Chapter One, the State of Utah funds the public school system using a Weighted Pupil Unit formula. Colleges and universities, including Salt Lake Community College, are funded based on an "annualized full-time equivalent" formula.

High school students completing concurrent enrollment courses are included in the Weighted Pupil Unit formula. The high schools also receive an

additional $1,500 for each "annualized full-time equivalent" student attending concurrent enrollment courses. Of the $1,500, the high school keeps $1,000 and pays the college or university $500 or 1/3 of the total amount. The amount received by the college or university is used to cover administrative and other costs of offering a concurrent enrollment program and is the only amount received by the college or university for students participating in the concurrent enrollment program. The total amount paid by the State of Utah for concurrent enrollment courses offered through Salt Lake Community College is this $1,500 for every annualized full-time equivalent student.

According to Salt Lake Community College's budget office, Salt Lake Community College received an average of $2800 from the State for every annualized full-time equivalent student taking regular college courses but no payment directly from the State for concurrent enrollment students. This amount changes annually but is the amount used in these calculations. The amount represents a reasonable approximation of amounts paid to Salt Lake Community College over the life of the concurrent enrollment program and is the amount paid to Salt Lake Community College during the 1997-98 academic year.

Using the amounts paid to the high schools for annualized full-time equivalent concurrent enrollment students and to Salt Lake Community College for annualized full-time equivalent students taking regular courses, and performing a simple subtraction, the potential savings to the State of Utah for every annualized full-time equivalent concurrent enrollment student is $1,300

($2,800 for a regular college student subtracting $1,500 for a concurrent enrollment student leaves a savings of $1,300).

However, the savings to the State of Utah decrease if courses completed do not count toward an Associate of Applied Science, Associate of Science, Associate of Arts, or certificate. When concurrent enrollment courses do not count, the State "pays twice." The high school still counts the students in its Weighted Pupil Unit calculation, and all concurrent enrollment courses in the annual full-time equivalent calculation receive the additional $1,500.

Additionally, if none of the concurrent enrollment courses count toward a degree or certificate, the student realizes no reduction in the number of regular college courses, and the student then must take a complete program of regular college courses at the college. In this scenario, Salt Lake Community College is able to include in its "annual full-time equivalent" calculation the student's entire degree program.

In the best case scenario where all concurrent enrollment courses count toward a degree or certificate, the State of Utah would save $1,300 for each annualized full-time equivalent student. In the worst case where no concurrent enrollment course counted toward a degree or certificate, the additional cost to the State of Utah would be $1,500 per annualized full-time equivalent student.

These are the amounts to be used in the calculation of costs and savings to the State of Utah. In those situations where the concurrent enrollment courses count toward college graduation, the State of Utah will save $1,300. Those courses that do not count toward college graduation cost Utah $1,500.

Of the students who graduated from Salt Lake Community College in 1997-98, 158 had completed at least one concurrent enrollment course. The graduating class of 1998-99 included 218 students who completed at least one concurrent enrollment course, and the graduating class of 1999-2000 included 260 students who had completed at least one concurrent enrollment course. The academic records of these 636 students were studied in detail to determine the impact of the concurrent enrollment courses on the students' progress toward graduation.

In order to determine which students in these graduating classes had completed concurrent enrollment courses, course data was reviewed for every course taken by every graduating student. Every course that students enrolled in included a site code that had to be verified as a concurrent enrollment site. Every student who had completed a concurrent enrollment course was included along with every concurrent enrollment course each student completed. A visual verification was made of every course and site code as a check to guarantee the data was accurate.

The raw data evaluated included information about the student's chosen major, the site where the course was taken, the course number and name, the number of credit hours, and the grade the student received. This information was used to determine whether each course counted toward graduation or did not count toward graduation. Each course counted toward graduation if it met one of the three following criteria: 1) fulfilled a general education requirement, 2) fulfilled a major course requirement, or 3) fulfilled an elective requirement for the

student's selected major. Salt Lake Community College's catalog was used to determine major course and elective requirements. Any courses that did not meet one of these criteria did not count toward graduation. Table 11 below summarizes the results of this evaluation.

Table 11 Concurrent Enrollment Courses that count toward a degree or certificate				
Academic Year	1997-1998	1998-1999	1999-2000	Totals
Total courses	422	614	688	1724
Total credit hours	1822	2587	2946	7355
Courses counted toward a degree	359	506	549	1414
Credit hours counted toward degree	1562	2139	2450	6151
Courses not counted toward degree	63	108	139	310
Credit hours not counted toward degree	260	448	496	1204
Percent of credit hours that counted toward a degree	85.73%	82.68%	83.16%	83.63%

The information presented in Table 11 suggests that of the 1822 credit hours representing 422 concurrent enrollment courses taken by students who graduated from Salt Lake Community College in the 1997-98 academic year, 1562 credit hours representing 356 courses or 85.73 percent of the credit hours taken counted toward the completion of a degree or certificate. Similar information is provided for academic years 1998-99 and 1999-2000. Totals for all three years included in the study are also provided and suggest that 83.63

percent of the concurrent enrollment courses completed during this three year period counted toward graduation.

Determining the percentage representing those courses that count toward graduation is important because this is the figure to be compared with the break-even percentage. This comparison identifies whether the percentage of courses that count toward graduation is close to or not close to the break-even percentage.

The percentages stated in Table 11 were calculated using yearly totals rather than calculating a percentage for each individual student and summing the percentages. These percentages do not apply to every individual student or to every academic year.

Determination of the break even point

A quick review of Table 12 is useful in understanding the break even point and its calculation. Table 12 states that for each annualized full-time equivalent student taking concurrent enrollment courses, the State of Utah loses $1,500 if none of the completed courses count toward graduation. However, if all completed courses count toward graduation, the State of Utah realizes a savings of $1,300 for each annualized full-time equivalent student.

Table 12:
Continuum of potential costs & savings to State of Utah

-1,500 (costs)	break even point somewhere between the two ends	1,300(savings)

- If all concurrent enrollment courses count toward graduation, the State of Utah saves $1,300 per annualized full-time equivalent student. Student benefits are maximized.
- If no concurrent enrollment courses count toward graduation, each annualized full time equivalent student costs Utah $1,500. Students receive neither time- nor cost-savings.
- Break even point is a point at which State of Utah neither saves funding nor pays additional funding to either higher education institutions or high schools. Student benefits are somewhere between no savings and maximum savings.

One may initially assume that for the State of Utah to break even, 50 percent of the classes must count and 50 percent must not count toward graduation. A simple example shows this assumption is not true.

If there are 200 annualized full-time equivalent students who have completed concurrent enrollment courses and 50 percent of the courses completed counted toward graduation, the State of Utah would save $130,000 (50 percent multiplies by 200 AFTE multiplied by $1,300). However, the State of Utah would also lose $150,000 for the courses that did not count toward graduation (50 percent multiplied by 200 AFTE multiplied by -$1,500). The net loss to the State of Utah would be $20,000.

In order for the State of Utah to actually break even in its funding for the concurrent enrollment program, slightly more than 50 percent of the courses must count toward graduation. The actual percentage is derived by dividing $1,500 by $2,800. Fifteen hundred dollars represents the amount of money the State loses for every annualized full-time equivalent concurrent enrollment student if none of the concurrent enrollment courses completed count toward college graduation and $2,800 represents the total length of the range (see Table 12 on previous page). Dividing $1,500 by $2,800 gives the percentage of concurrent enrollment courses that must count toward graduation if the State of Utah is to break even. This approach determines that 53.5714 percent of all concurrent enrollment courses completed must count toward graduation for the State of Utah to "break even."

The following illustration is provided as an example. Assume that 100 annualized full-time equivalent students completed concurrent enrollment courses. If the State of Utah was to break even, 53.5714 percent of this annualized full-time equivalent would count and 46.4286 percent would not count. The following calculations show that this is the break even percentage:

100 AFTE * 53.5714% * $1,300 = $69642.86 for classes that count, and
100 AFTE * 46.4286% * ($1,500) = ($69642.86) for classes than do not count.

The cost amount and the savings amount are equal and the State of Utah broke even in funding the concurrent enrollment program.

The primary purpose for determining the break-even point is to find out where on the cost continuum Salt Lake Community College's concurrent enrollment program neither saves nor costs the State of Utah its financial resources. This break-even percentage becomes a comparison point and has limited additional benefit.

In this study an average of 83.63 percent of the concurrent enrollment courses included count toward graduation. If the break-even percentage is 53.5714 percent, then subtracting the break-even percentage from the calculated percentage of courses that count toward graduation is +30.0586 percent.

Comparison of student enrollment data to program funding continuum

Table 12 represents the program funding continuum. This table identifies the funding saved by the State of Utah if all courses count toward graduation and the cost to the state if no courses count. The savings are for each annualized full-time equivalent. The cost continuum is represented by the line between these two points (-$1,500 for concurrent enrollment students whose courses do not count toward college graduation to $1,300 for concurrent enrollment students whose courses do count toward college graduation).

Table 13 represents the general area on the continuum where each individual student's combination of courses are located. Four general areas on the continuum are identified in this table. They are 1) the number of students who had every concurrent enrollment course count toward graduation, 2) the

number of students where at least one course did not count toward graduation but more than 53.5714 percent of the courses counted, 3) the number of students where at least one course counted toward graduation but less than 53.5714 percent of the courses did not count toward graduation, and 4) the number of students where no course counted toward graduation.

Those students in category one had 100 percent of their courses count toward graduation and the students in category four had 0 percent of their courses count. Those students in the second and third categories are most interesting because careful analysis was required to determine the percentage of concurrent enrollment courses that counted or did not count toward graduation. Table 14 lists the students in categories two and three with the percentage of their credit hours that counted toward graduation. This detailed information is in Appendix C.

Table 13 Representation of where on continuum line each student's combination of courses lies				
Academic Year	1997-1998	1998-1999	1999-2000	Totals
Number of students who had every concurrent enrollment course count toward graduation	129	160	182	471
Number of students where at least one course did not count toward graduation but more than 53.5714% of courses did count.	11	22	34	67
Number of students where at least one course counted toward graduation but less than 53.5714% of courses counted.	3	12	19	34
Number of students where no course counted toward graduation	15	24	25	64
Total number of students	158	218	260	636

Program costs and potential savings to the State of Utah

Sufficient information is now known to calculate costs and potential savings to the State of Utah. Calculating costs and potential savings to the State of Utah is a four-step process. First, the total number of credits completed has to be converted to annualized full-time equivalents. This is done by dividing the total number of credit hours by 45 (the number of credit hours that represent a full academic load on the quarter system).

Second, calculate the percentage of annualized full-time equivalents whose courses counted toward graduation, and multiply that number by $1,300. In this calculation the percentages for each academic year are used. This represents the savings to the State of Utah for those courses which counted toward graduation.

Third, calculate the percentage of annualized full-time equivalents whose courses did not count toward graduation, and multiply that number by ($1,500). This represents the cost to the State of Utah for those courses which did not count toward graduation.

The final step is to subtract program costs from savings to calculate net savings for 1997-98, 1998-99 and 1999-2000. The calculations used here represent a close approximation rather than an exact amount since the concurrent enrollment courses were taken as early as 1991-92 and as recently as 1999-2000, amounts paid to Salt Lake Community College for annualized full-time-equivalents may have changed slightly from year to year, and potential savings may be impacted by contextual information provided in Chapter Four. Table 14 provides the results of these steps and calculations.

Table 14 Calculation of costs and savings to the State of Utah			
	1997-98	1998-99	1999-2000
Total Credit Hours	1822	2587	2946
Annualized Full-time Equivalent	40.49	57.49	65.47
Percent of courses that count toward graduation	85.73%	82.68%	83.63%
AFTE savings amount	$45,124	$61,791	$71,175
Percent of courses that do not count toward graduation	14.27%	17.32%	16.37%
AFTE cost amount	($8,667)	($14,936)	($16,075)
Annual costs/savings	$36,458	$46,856	$55,099
Total savings to the State of Utah			$138,413

Table 14 suggests that annual potential savings to the State of Utah for 1997-98, 1998-99 and 1999-2000 are respectively $36,458, $46,856 and $55,099. The total savings are $138,413. This analysis indicates that savings to the State of Utah were significantly higher than the costs.

CHAPTER SIX

Conclusions and recommendations

Three general conclusions result from this study. First, students who participate in Salt Lake Community College's concurrent enrollment program save money. Second, students also experience time savings through participation in the college's concurrent enrollment program. However, even with the benefits of concurrent enrollment, participating students need to enroll in more concurrent enrollment courses so that cost- and time-savings may be increased. Third, the State of Utah's concurrent enrollment program as implemented at Salt Lake Community College provides potential cost savings to the State of Utah. Each of these general conclusions is presented in detail below.

Conclusions

Cost savings to students

Students who participate in Salt Lake Community College's concurrent enrollment program must apply for admission to the college prior to enrolling in concurrent enrollment courses and pay a one-time-only $20.00 admission fee. Students taking concurrent enrollment courses pay no other fees or tuition for their concurrent enrollment courses but may have to purchase textbooks. Neither textbook costs nor the one-time-only admissions fee are included in the cost-savings calculation since students bear these costs whether the courses are taken concurrently or as a regular college courses.

In this study concurrent enrollment courses were completed by 158 of the students who graduated in 1997-98, 218 of the 1998-99 graduates and 260 of the 1999-2000 graduates. Of these 636 graduates who completed concurrent enrollment courses, 230 students completed one course and an additional 164 students completed two courses. The following table is an extract of Table 10 presented in Chapter Five and lists the number of courses completed, the number of students who completed the courses, the average credit hours represented by the number of courses completed, and the average savings by the number of courses completed.

Table 15
Number of courses completed by graduates each academic year and potential savings

Number of courses	Number of students completing courses			Average credit hours completed			Average Approximate tuition savings per student*
	1997-1998	1998-1999	1999-2000	1997-1998	1998-1999	1999-2000	
1	65	77	88	4.33	4.39	4.36	$191
2	34	58	72	9.55	8.93	9.16	$362
3	19	21	38	13.73	13.86	14.09	$604
4	12	21	19	17.25	17.00	17.35	$715
5	10	12	10	21.30	20.50	21.11	$906
6	7	13	10	27.43	21.69	23.10	$1,017
7	5	6	11	25.40	28.67	26.55	$1,128
8	3	6	6	34.00	33.00	32.67	$1,393
9	1	1	3	35.00	45.00	35.33	$1,621
10	1	1	2	33.00	29.00	42.00	$1,430
11	1	0	1	45.00	50.00	47.00	$1,997
12	0	1	0	0	56.00	0	$2,373
15	0	1	0	0	55.00	0	$2,256

* Approximate tuition savings are calculated using tuition rates for 1995 and an average credit hour load of 9 hours

This table identifies the savings amounts by number of credit hours completed. Students who completed one course averaged slightly over 4 credit hours and realized tuition savings of approximately $191. Students who completed 11 courses realized cost savings of approximately $1997. A careful review of this table indicates that student savings increase dramatically as more classes are completed. When students take greater advantage of the concurrent

enrollment program their potential for realizing cost-savings increases significantly. Information from Table 9 in chapter 5 identifies the estimated total cost-savings to students as $315,251.

These tuition savings are an estimate since tuition rates change annually and total tuition paid is determined by the year in which the courses were taken and how many courses were taken during each quarter or semester. However, for the purpose of this study, approximate tuition savings still provide a general idea of the cost-savings received by participating students. These amounts are considered representative since they represent an approximate average of courses taken and tuition charged to students.

Since there is a direct relationship between the number of courses taken and the monetary savings realized by students, from the students' perspective, the ideal would be to have every student complete the maximum number of concurrent enrollment credits allowed. If the maximum number of courses were completed, students would maximize cost-savings and time-savings. A discussion of time-savings realized by students is presented below.

Time savings to students

Identifying specific time savings in months or quarters is difficult since college students have significantly varied attendance patterns. Many college students work full-time and attend school part-time. Other college students drop out for a quarter periodically to earn tuition money and then return to school. Another group of students attend full-time and move through their educational

experience as quickly as possible. However, "average" time savings may be discussed.

Salt Lake Community College's Fact Book identifies the average number of credits taken by students each year. Historically this average credit hour load is between 9 and 10 credit hours per student per quarter. Using this average credit hour load and dividing it into the number of concurrent enrollment credit hours completed, an estimate of time savings can be calculated. Table 16 presents an estimate of time savings to students who graduated from Salt Lake Community College in 1997-98, 1998-99 or 1999-2000.

Table 16 Percentage of students who completed specified concurrent enrollment courses								
Number of courses	Number of students completing courses				Percent of students completing specified number of courses	Average credit hours completed		
	1997-1998	1998-1999	1999-2000	Total Students		1997-1998	1998-1999	1999-2000
1	65	77	88	230	36.16%	4.33	4.39	4.36
2	34	58	72	164	25.79%	9.55	8.93	9.16
3	19	21	38	78	12.26%	13.73	13.86	14.09
4	12	21	19	52	8.18%	17.25	17.00	17.35
5	10	12	10	32	5.03%	21.30	20.50	21.11
6	7	13	10	30	4.72%	27.43	21.69	23.10
7	5	6	11	22	3.46%	25.40	28.67	26.55
8	3	6	6	15	2.36%	34.00	33.00	32.67
9	1	1	3	5	0.79%	35.00	45.00	35.33
10	1	1	2	4	0.63%	33.00	29.00	42.00
11	1	0	1	2	0.31%	45.00	50.00	47.00
12	0	1	0	1	0.16%	0	56.00	0
15	0	1	0	1	0.16%	0	55.00	0
Totals	158	218	260	636	100.00%			

Identified in this table are the number of students who completed the listed number of concurrent enrollment courses, the number of average credit hours these courses represent, and the percentage of students who completed the listed number of concurrent enrollment courses. For example, 36.16 percent of participating students completed one concurrent enrollment course.

The purpose of Table 17 is to show the number of quarters saved by students who completed concurrent enrollment courses. The projections are based on an average enrollment of 9.5 credit hours per quarter and 15 credit hours per quarter.

Table 17
Number of concurrent enrollment courses completed and potential time savings

Number of courses	Total Number of students completing courses	Average credit hours completed	Approximate quarters saved at 9.5 credit hours per quarter	Approximate quarters saved at15 credit hours per quarter
1	230	4.36	0.46	0.29
2	164	9.22	0.97	0.61
3	78	13.89	1.46	0.93
4	58	17.20	1.81	1.15
5	32	20.94	2.20	1.40
6	30	24.07	2.53	1.60
7	22	26.88	2.83	1.79
8	15	33.22	3.50	2.21
9	5	38.44	4.05	2.56
10	4	34.08	3.59	2.27
11	2	47.33	4.98	3.16
12	1	56.00	5.89	3.73
15	1	55.00	5.79	3.67

Table 17 lists the total number of concurrent enrollment courses completed by individual student and the number of students who completed the specified number of courses. The 1997-98, 1998-99 and 1999-2000 graduates are included in these figures.

In addition to calculating how many students completed the specified number of concurrent enrollment courses, the average number of credit hours completed by number of courses taken is given. For example, students who completed 3 concurrent enrollment courses averaged a total of 13.89 credit hours for the three courses.

To determine the time-savings to students who completed concurrent enrollment courses, the average number of credit hours completed was divided by 9.5 and 15. The result of these calculations represents the number of quarters saved by students completing the number of concurrent enrollment classes specified. These two numbers represent respectively the average enrollment for all students at Salt Lake Community College of 9.5 credit hours and the enrollment representing a suggested "full" load.

The information included in Table 17 suggests that those students who completed one concurrent enrollment course saved an average of 4.36 credit hours which represents .46 quarters if the average load is 9.5 credit hours per quarter or .29 quarters if the average load is 15 credit hours per quarter. Using another example, students who completed 11 courses averaged 47.33 credit hours of concurrent enrollment courses. If enrolling in an average of 9.5 credit hours per quarter, these students saved an average of 4.98 quarters. However, if

the average load was 15 credit hours per quarter these students saved an average of 3.16 quarters.

The results of this study indicate that students who take concurrent enrollment courses have the potential to save significant amounts of time as they progress through their experience at Salt Lake Community College. It also indicates that time saved by each student is proportional to the number of concurrent enrollment courses completed. However, as presented in Table 16, more than 36 percent of students only completed one concurrent enrollment course. Students who enrolled in 9.5 credit hours (the average number of credit hours enrolled in each quarter) saved approximately half of a quarter. Students who enrolled in a full load of 15 credit hours experienced a time savings of slightly more than one fourth of a quarter.

A review of Table 16 suggests that more than 60 percent of concurrent enrollment students enroll in three or fewer concurrent enrollment courses. These students receive minimal cost- or time-savings from the concurrent enrollment program.

Another concern is identified in Table 2 which states that some students who graduated in 1997-98, 1998-99 or 1999-2000 began taking concurrent enrollment as early as 1990. The majority of students completed their degree in five years or less, but 209 of the 688 students required more than five years to complete their associates degree.

The conclusion of this section is that students have the potential to save significant amounts of time as they complete their degree. However, students

need to be encouraged to enroll in more concurrent enrollment courses. More than half of the students who enrolled in concurrent enrollment courses saved less than one quarter.

Cost savings to the State of Utah

This study included students who graduated from Salt Lake Community College in academic years 1997-98, 1998-99 and 1999-2000. The data suggests approximate savings of $138,413 to the State of Utah. These savings were generated because 83.63 percent of concurrent enrollment courses completed by 636 graduates counted toward an associates degree or certificate.

Even though the dollar amount of savings was not large when compared to the education budget of the State of Utah, the percentage of courses that count toward graduation is impressive and is significantly higher than the break-even point of 53.5714 percent. However, when considering the calculated savings amount, the impact of graduates from different academic years, the growth of the concurrent enrollment program at Salt Lake Community College, and the context of the study may have an impact on potential savings realized by the State of Utah and should be considered.

When considering graduates from other academic years who have completed concurrent enrollment courses, the percentage of concurrent enrollment courses that counted toward graduation becomes important. Calculating the percentage of courses that counted toward graduation for students graduating in other academic years and comparing it to the calculated

percentage in this study will give an indication of how the savings generated for the State of Utah in other academic years compares with the savings calculated in this study. Not only is the percentage important, but the number of credit hours is also important since credit hours are used to calculate annualized full-time equivalent students. The total number of credit hours is affected by the growth of the concurrent enrollment program.

Growth of the concurrent enrollment program at Salt Lake Community College may increase or decrease cost savings to the State of Utah. As the concurrent enrollment program grows, if the calculated percentage of courses that count toward graduation is greater than the percentage that represents the break-even point, then potential savings to the State of Utah will increase.

The concurrent enrollment program has grown consistently since the 1989-90 academic year with over 11,500 students in concurrent enrollment courses in the 1998-99 academic year. Because the number of concurrent enrollment course offerings at Salt Lake Community College has increased, students have a greater selection of courses now than they have previously had. This puts additional pressure on high school counselors to suggest courses and students to select courses more carefully. Students need to select courses consistent with their educational goals, and future studies need to be broadened to include these educational goals.

Understanding the savings to the State of Utah identified in this study is important because interest seems to be rising at the Board of Regents and within the State Legislature for information and accountability of the programs offered

by Salt Lake Community College and the other higher education institutions including concurrent enrollment.

Recommendations for further study

This study focused on students who graduated from Salt Lake Community College in 1997-98, 1998-99 or 1999-2000 and completed at least one concurrent enrollment course. One of the purposes of the study centered on determining cost savings generated by students completing concurrent enrollment courses and time savings received by these students. The data showed that participating students realized cost and time savings, but more than half of the students received minimal benefits.

This study identified a percentage representing the break-even point between costs and savings, a percentage of courses that counted toward graduation, and calculated savings. These figures become a starting point and can perhaps be used in comparisons with future similar calculations.

Additional studies need to be conducted using data from other higher education institutions to determine if cost- and time-savings benefits received by students at the other institutions are similar to those experienced by Salt Lake Community College students. These studies will help to determine if concurrent enrollment benefits and experiences are similar at other state higher education institutions. Studies should also be conducted which include students who completed concurrent enrollment courses but did not graduate. Additional studies may be conducted to address the following questions:

1. How does a cost savings analysis using data from other higher education institutions in the State of Utah compare to the cost savings analysis completed in this study? How do the results of this study compare with the results of similar studies using data from other higher education institutions?
2. As the number of participants in the concurrent enrollment program continues to increase, do the cost savings benefits received by participants and the State of Utah remain the same, increase or decrease?
3. What cost savings are generated for students whose goals are to complete less than an associates degree or certificate, then move into the work force?
4. What is the impact of concurrent enrollment courses on the total enrollments at Salt Lake Community College? Is concurrent enrollment a recruiting tool or do overall enrollments at Salt Lake Community College decrease because students have taken courses concurrently rather than as on-campus courses?
5. What is the impact of concurrent enrollment courses on students who transfer from one state institution to another state institution?
6. How do cost savings generated by graduates from other academic years compare with cost savings calculated in this study? Would the cost savings to the State of Utah increase, decrease or show no change?

7. Since the concurrent enrollment program at Salt Lake Community College has grown considerably, how have cost savings to the State of Utah been affected by the growth?
8. Do concurrent enrollment programs at other state institutions generate cost savings for the State of Utah similar to those identified in this study?
9. How do concurrent enrollment programs at other state institutions compare in size and impact to the concurrent enrollment program at Salt Lake Community College?
10. What would the impact on cost savings to the State of Utah be if all students who completed concurrent enrollment courses were included in the study? Students to be included are those students who went into the military, went on a religious mission, completed vocational/technical courses then entered the work force, completed some courses at Salt Lake Community College then transferred before completing an associates degree, went immediately to a four-year college or university, or chose to attend a college or university out of the state.
11. How do cost savings generated by the concurrent enrollment program of the state's higher education institutions compare?
12. What is the impact of socioeconomic status on participation in concurrent enrollment programs across the State of Utah and at Salt Lake Community College? What is the impact of socioeconomic status on success rates of participants in concurrent enrollment programs in the State of Utah?

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APPENDICES

APPENDIX A

POLICY FOR GUIDELINES ON THE DELIVERY OF DUAL CREDIT COURSES

February, 1992

Definition

These guidelines shall apply to dual credit courses that are offered in high schools to high school students which enable a student to receive both high school and college level credit simultaneously. High school students eligible for dual credit cour ses shall be juniors or seniors who have been recommended by their principal.

Structure and Content

Dual credit courses shall duplicate the institution's regular curriculum offerings delivered on-campus to college students only. Course content, student requirements, and standards of evaluation shall be comparable to curriculum offerings delivered on -campus.

Quality control shall also include similar academic support for dual-credit students including library materials and access to help from instructors outside of class.

Faculty

Faculty teaching dual credit courses shall, when possible, be regular institutional faculty, i.e., full-time faculty. In situations where adjunct faculty are used, they shall have qualifications which reflect customary institutional standards for facu lty with a similar content teaching assignment. Faculty teaching dual credit courses shall ordinarily hold at a minimum a master's degree in the subject field to be taught. Adjunct faculty shall be provided with support services comparable to those prov ided to regular faculty. Examples of such services include, for example, staff support and assistance in curriculum development. In addition, adjunct faculty shall receive periodic orientation and supervision to ensure that the institution's expectation s concerning delivery of instruction are met.

Assessment

For "mixed classes," i.e., classes which combine students receiving high school credit only with students receiving both high school and college credit, assessment of student learning outcomes shall involve the use of external evaluation, preferably su ch as the Advanced Placement (AP) examination or other nationally normed examinations if available, or institutionally approved assessment instruments. For all other dual credit courses, external evaluation of student learning is strongly encouraged but not required.

Transferability of Credit

Credit earned from dual credit courses meeting these guidelines shall fall under the same CBHE guidelines as all other college courses for transfer of credit.

Reporting

Institutions shall be responsible for keeping accurate records about the policies and procedures used in the delivery of dual credit courses as well as the number of student served and the number of locations

supporting instructional sites. Regular re ports about dual credit courses will not be required; however, if questions arise, or should the Board decide to initiate a study about dual credit courses, institutions should be prepared to demonstrate that they have followed these policies.

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Return to Academic Policies and Programs

Missouri Department of Higher Education
webmaster@dp.mocbhe.gov

Created by Steve Judd
c481538@showme.missouri.edu
URL: http://www.mocbhe.gov/text/acadafrs/dualcrd2.htm
Last Updated: August 1, 1996

http://www.mwsc.edu/~cwa/dualcred.html

Guidelines for the Delivery of Dual-Credit Composition Courses

--Unanimously approved on October 27, 1995, by the membership of the Missouri Colloquium on Writing Assessment.

Because composition is an integral part of the college experience, the membership of the Colloquium on Writing Assessment, a state-wide organization of writing professionals from Missouri two- and four-year public institutions of higher learning, opposes the collapse of the college freshman composition course into the high school senior English course; however, when dual-credit composition courses are offered, we strongly recommend that their delivery follow "The Guidelines on the Delivery of Dual-Credit Courses" as developed by the CBHE (see below) and incorporate the principles outlined below.

Dual-credit courses are courses taught on the high school campus which count for both high school and college credit.

- College faculty should teach all dual-credit composition courses; however, when that is not feasible, high school faculty should possess the same/similar credentials to those teaching the dual-credit course on college campuses (see Appendix A). Student teachers should not be instructing dual- credit courses.
- Syllabi in dual-credit courses should mirror those used in the English Department of the institution granting credit.
- Students attempting dual-credit writing courses should be screened via a direct measure of their writing ability (i.e., one or more samples of their writing) before being allowed to enroll in the dual-credit course. The placement process should be directed by the English Department of the post-secondary institution granting credit.
- A liaison from the coordinating college should conduct on-site visits at intervals throughout the delivery of the dual-credit course (see Appendix B). The liaison should have a background in classroom teaching and composition theory.
- Dual-credit instructors should be provided with support services, including professional development opportunities, comparable to their college counterparts.
- Dual-credit classes should be discrete; i.e., students should be grouped together in classes comprised only of students taking the course for dual credit.
- Students in mixed classes (see CBHE Guidelines,"Assessment") should be evaluated by an external measure, e.g., the Advanced Placement examination, the SAT II Writing examination, or institutionally-approved assessment instruments.
- Assessment of student work should be shared by the teacher of the dual-credit course and the college liaison.
- The delivery of dual-credit courses is the joint responsibility of the participating high school and the institution granting college credit.

Appendix A

Approval of High School Faculty

As required by the Coordinating Board, faculty teaching dual-credit composition courses "shall ordinarily hold at a minimum a master's degree" in English. In addition, the following information and documents of those who are applying to teach this course are required:

documents of those who are applying to teach this course are required:

1. Vita, including complete transcripts.
2. A letter of recommendation from the teacher's principal.
3. A letter of application from the teacher, discussing, for example, backgrounds in teaching composition, relevant workshops taken, general philosophy of teaching composition, and the type of students who would enroll in this course and the teacher's expectations of them.
4. Demonstrated background experiences or training in composition theory and evaluation of student writing. Ongoing training demonstrated by one or more of the following: participation in a Writing Project; participation in one or more conferences dedicated to the teaching of writing (e.g., the annual Write-to-Learn conference); membership in MATE; or participation in the assessment of student writing with college faculty, etc. Individuals should provide a thorough synopsis of such experience in their letters of application. Where possible, they should also provide a copy of a "Teaching Journal."

When high school faculty apply to teach the dual-credit course, the decision to approve these teachers belongs to the English Department of the post-secondary institution granting credit.

Appendix B

Role of the Liaison

Liaisons are full-time members of the Department of English with experience in teaching composition. Their purpose is to assist the high school teacher in conducting the dual-credit class in accordance with the guidelines established by the university/college bulletin and the departmental syllabus by providing information and support.

The liaison should make a minimum of three visits to the high school site where the dual-credit course is being offered. The first of these meetings should occur prior to the beginning of the semester. Additional conferences, as agreed upon by the liaison and the high school instructor, may be scheduled. These visits are intended to be collegial exchanges between the high school and the college faculty members.

The liaison should receive appropriate compensation in the form of release time.

Guidelines on the Delivery of Dual Credit Courses

Missouri Coordinating Board of Higher Education (CBHE) - February 1993

Definition
These guidelines shall apply to dual-credit courses that are offered in high schools to high school students which enable a student to receive both high school and college-level credit simultaneously. High school students eligible for dual-credit courses shall be juniors or seniors who have been recommended by their principal.

Structure and Content
Dual-credit courses shall duplicate the institution's regular curriculum offerings delivered on-campus to college students only. Course content, student requirements, and standards of evaluation shall be comparable to curriculum offerings delivered on-campus.

Quality control shall also include similar academic support for dual-credit students including library materials and access to help from instructors outside of class.

http://www.mwsc.edu/~cwa/dualcred.html

Faculty
Faculty teaching dual-credit courses shall, when possible, be regular institutional faculty, i.e., full-time faculty. In situations where adjunct faculty are used, they shall have qualifications which reflect customary institutional standards for faculty with a similar content teaching assignment. Faculty teaching dual-credit courses shall ordinarily hold at a minimum a master's degree in the subject field to be taught. Adjunct faculty shall be provided with support services comparable to those provided to regular faculty. Examples of such services include, for example, staff support and assistance in curriculum development. In addition, adjunct faculty shall receive periodic orientation and supervision to ensure that the institution's expectations concerning delivery of instruction are met.

Assessment
For "mixed classes," i.e., classes which combine students receiving high school credit only with students receiving both high school and college credit, assessment of student learning outcomes shall involve the use of external evaluation, preferably such as the Advanced Placement (AP) examination or other nationally-normed examinations if available, or institutionally-approved assessment instruments. For all other dual-credit courses, external evaluation of student learning is strongly encouraged but not required.

Transferability of Credit
Credit earned from dual-credit courses meeting these guidelines shall fall under the same CBHE guidelines as all other college courses for transfer of credit.

Back to CWA Home Page.

APPENDIX B

FOREWORD

In response to requests for information about the Concurrent Enrollment Program, the Salt Lake Community College (SLCC) Concurrent Enrollment Department conducted two research projects and compiled a Fact Sheet. The following document includes these items.

SLCC Concurrent Enrollment Department

1999
Survey of Concurrent Enrollment Students Report

Salt Lake Community College
Department of Concurrent Enrollment

Introduction

In accordance with Salt Lake Community College's mission statement and accountability policy, the Concurrent Enrollment Department of Salt Lake Community College has produced a survey directed to high school students enrolled in concurrent enrollment. The department designed this survey to answer specific questions and to clarify the perceptions of high school students about the Concurrent Enrollment Program. As documented in the following report, the sample size for this survey was large. Because of the high response rate, the department felt confident in assuming that the following results represent the perception of the majority of concurrent enrollment students. This survey is the second of two surveys administered to concurrent enrollment students since the fall of 1998. The following report outlines and discusses the results of this second survey.

Background

Concurrent enrollment is a program which offers college-level courses to high school students for both high school and college credit. In the Salt Lake Valley, Salt Lake Community College administers this program, providing both liberal and vocational education courses to high school students. High school instructors who teach these courses at the high schools must meet the same academic requirements as SLCC faculty. Concurrent enrollment courses use the same curriculum, syllabi and textbooks as those taught on SLCC campuses. Thus, concurrent enrollment courses are equivalent to those taught at SLCC.

Standardization in course curriculum, testing and grading criteria assures and maintains the quality of concurrent enrollment courses. Each department offering concurrent enrollment courses determines this standardization. Some departments utilize standardized tests to monitor course content. In other departments teachers create and administer their own assessment system. A staff of full-time and part-time faculty liaisons assist and monitor this process to maintain quality control.

The Concurrent Enrollment Program at SLCC has experienced tremendous growth over the past ten years (see Figure 1 below). Enrollments have increased from 758 enrollments in 1989-90 to over 11,500 enrollments today.

Procedure

Salt Lake Community College registered a total of 4,817 students for concurrent enrollment courses Spring Semester, 1999. The department surveyed a sampling of 604 students (approximately 12.5%). Because of this large sample, the department felt confident in assuming that the majority of concurrent enrollment students would respond in a manner similar to the responses outlined by the Concurrent Enrollment Department in this report. The Department used the stratified random sampling method to gather information and administer this questionnaire. First, it employed Equation 1 to determine how many students in each school would be surveyed.

$$\left(\frac{n_{H.S.}}{n_{Total}}\right) \times \left(n_{Surveyed}\right) = N \qquad (1)$$

Where:

$n_{H.S.}$ = Number of SLCC concurrent enrollment students enrolled at specific high school

n_{Total} = Total number of SLCC concurrent enrollment students

$n_{Surveyed}$ = Number of students selected to participate in SLCC survey

N = Number of concurrent enrollment students surveyed at specific high school

As seen in equation (1) above, the fraction of the total concurrent enrollment students at each respective high school was determined and multiplied by the total number of students selected to participate in this survey. This equation produced the number of students that were to be surveyed at each high school.

Second, a random two-digit number was used to count through the list of concurrent enrollment classes. The resulting concurrent enrollment courses associated with the random number were selected by the department to be surveyed. Generally, concurrent enrollment found that the course associated with the random number did not possess enough students to numerically represent the high school. In this case, the method described above was repeated and multiple concurrent enrollment courses were selected until enough students had been selected to properly represent the high school. In other words, each high school's degree of participation in the survey was determined by the number of concurrent enrollment students who were registered at each high school. For example, in Figure 3, over half of all students in SLCC Concurrent Enrollment are from Granite School District. Because of this, Granite School District concurrent enrollment student views occupied over half of the responses collected for this survey.

Participation in SLCC Concurrent Enrollment by District

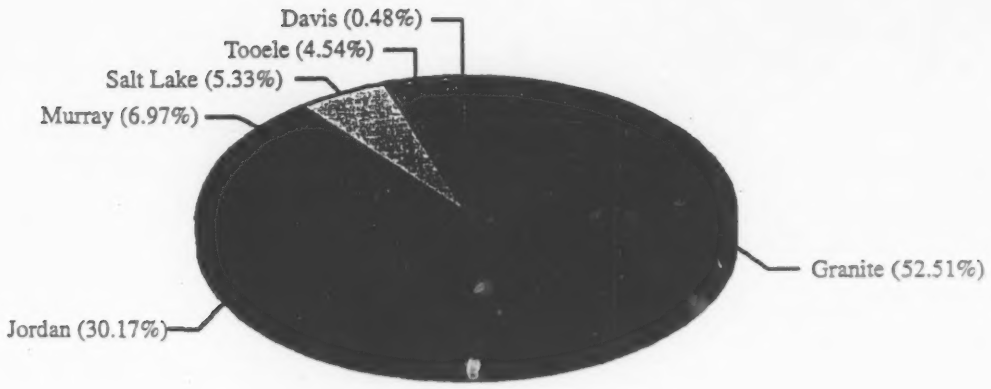


Figure 3: Participation by district in Salt Lake Community College survey.

Full-time liaisons in the concurrent enrollment program personally administered and monitored the surveys. Giving students an appropriate amount of time to respond (approximately 20 to 30 minutes), the liaisons collected and returned the surveys to Salt Lake Community College.

Results/Discussion

As illustrated on Figure 4, the survey found that a large number of concurrent enrollment students plan to work within six months after graduation. Also, a large group of students reported having plans to attend a two-year college or four-year university. Working and attending school are not mutually exclusive activities. Therefore, students have been counted more than once in this figure. Percentages illustrated in Figure 4 show the number of students that marked the indicated option at least once on their survey.

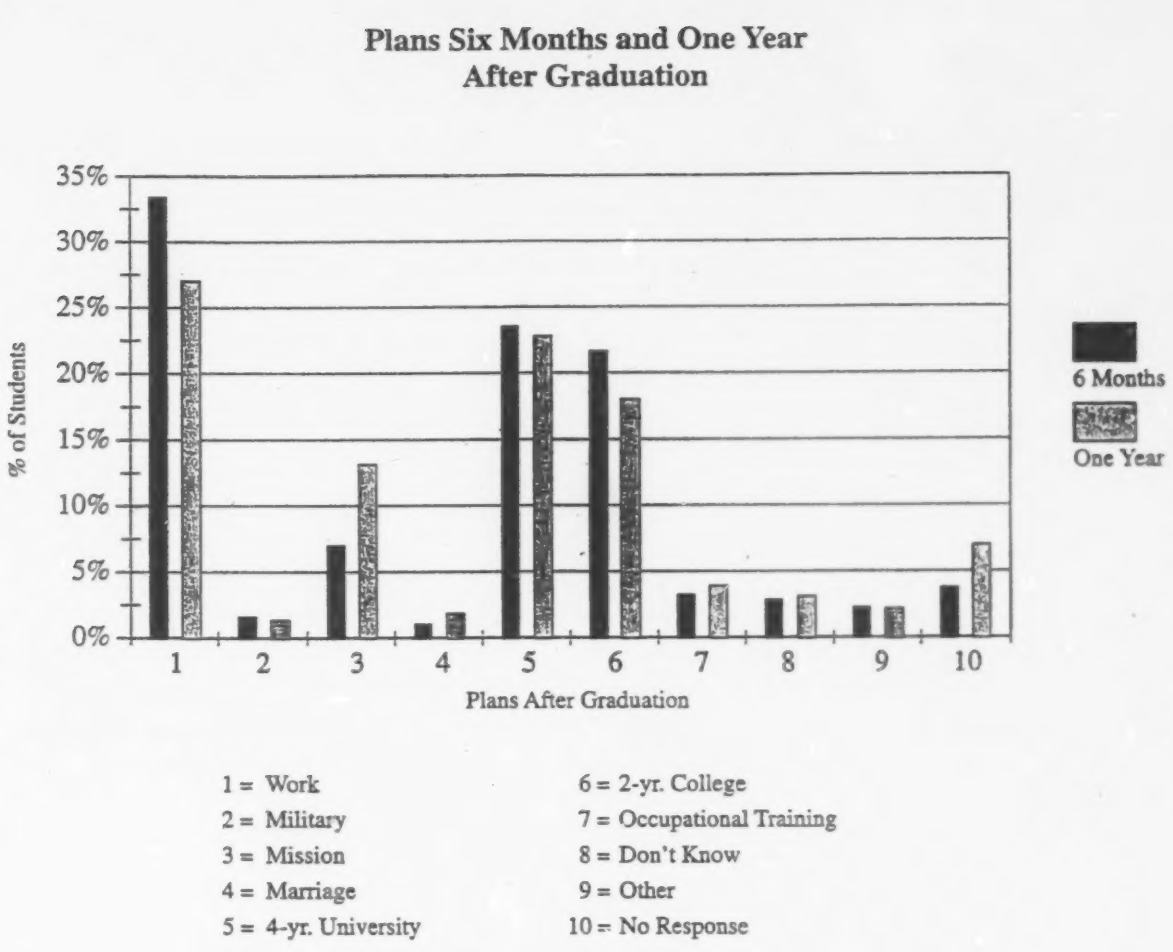


Figure 4: Student plans six months and one year after graduation from high school.

As illustrated in Figure 4, the department observed a difference in percentage between students who plan to work six months after graduation and those who plan to work one year after graduation. This decline in percentage could be attributed in part to the increase in number of students planning to serve a religious mission. In addition, the percentage of students planning to attend a two-year college also decreases between six months and one year. This decline could be attributed to the increase in the number of students planning to be married, planning to serve a religious mission, or have not yet decided what they want to do within one year of graduation.

The survey also asked how the students perceive their concurrent enrollment courses. It specifically asked them to identify their level of satisfaction with the courses. Figure 5 illustrates a statistical summary of their responses.

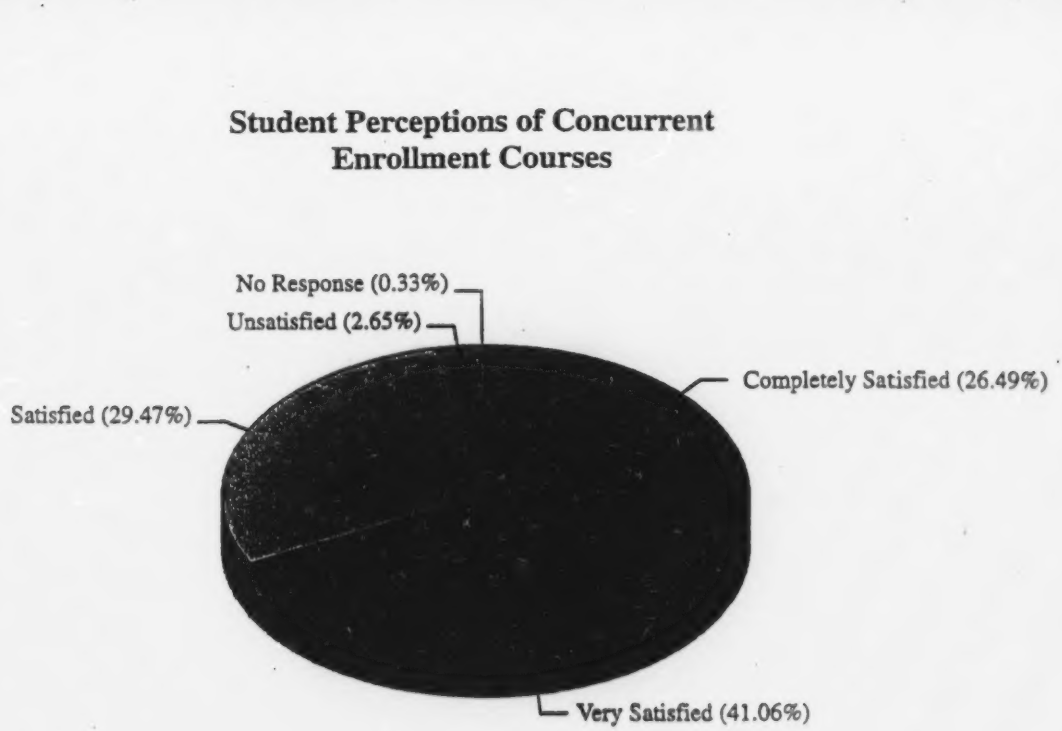


Figure 5: Student perceptions of their concurrent enrollment courses.

As seen in Figure 5 above, most students are very satisfied with their concurrent enrollment courses. In fact, approximately two-thirds of all students surveyed responded that they were either completely or very satisfied with the concurrent enrollment courses they have taken. In comparison, only one-third of high school students reported to be either completely or very satisfied, and over 9% reported being unsatisfied with their high school classes (see Figure 6 below).

In addition to these statistical responses, the survey asked students for written feedback about improving the program. The majority of responses reveals a perception consistent with the statistical information. A number of students wrote responses such as, "add more classes in different varieties" and "make more options available to high school students." Furthermore, a number of comments indicated student satisfaction with concurrent enrollment courses. "I think more classes should be offered. Some high school students would rather take concurrent enrollment classes than regular high school classes." "No suggestions; you just have to be willing as a student, to put in the time and effort to make the classes enjoyable." "I think that it is run very well. I really like and understand the class work."

As stated in the paragraph above, many students suggested that more concurrent enrollment courses should be offered. In addition, many students indicated that they would rather take concurrent enrollment courses than regular high school courses in their senior year. As illustrated in Figure 6 below, the large majority of students are satisfied with their high school courses, but not as satisfied as they are with concurrent enrollment classes.

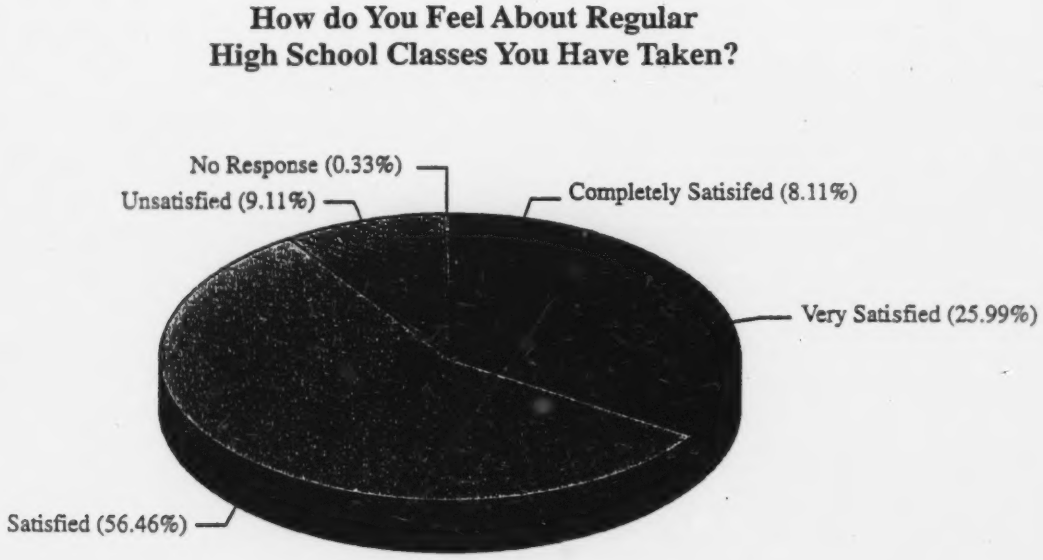


Figure 6: Student perceptions of their high school courses.

High school students participating in concurrent enrollment courses may possess a high degree of satisfaction because of quality instruction, SLCC liaison interaction and support. Also, this information may explain why students want more concurrent enrollment courses offered through SLCC.

Furthermore, the survey asks students how their experience in these courses affected their decisions to attend college. More than one-half of all students reported that concurrent enrollment has positively influenced their decision to go to college. (See figure 7 on page 12).

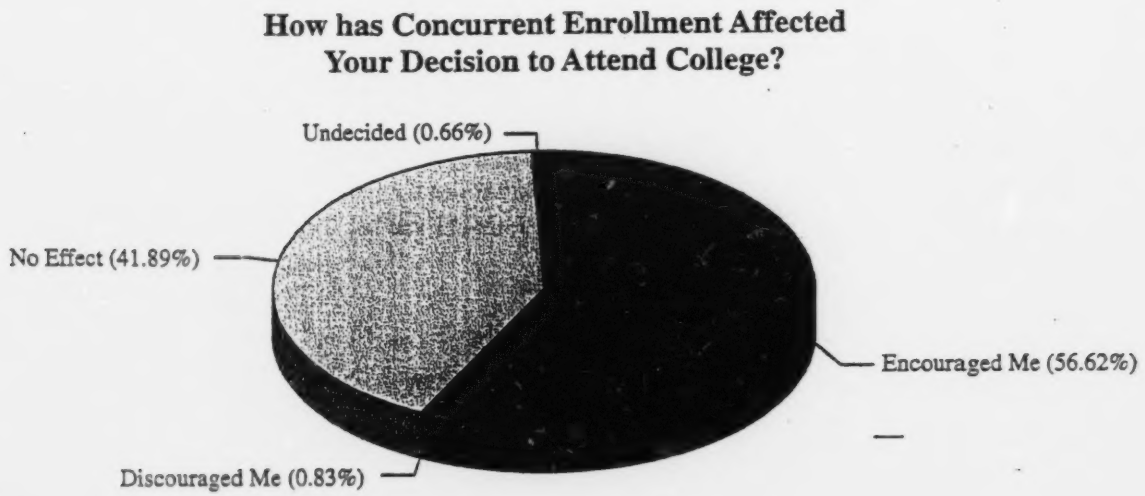

How has Concurrent Enrollment Affected Your Decision to Attend College?
Undecided (0.66%)
No Effect (41.89%)
Encouraged Me (56.62%)
Discouraged Me (0.83%)

Figure 7: Concurrent enrollment influence on students' decisions to attend college.

Additionally, the survey asked students what college they planned to attend.

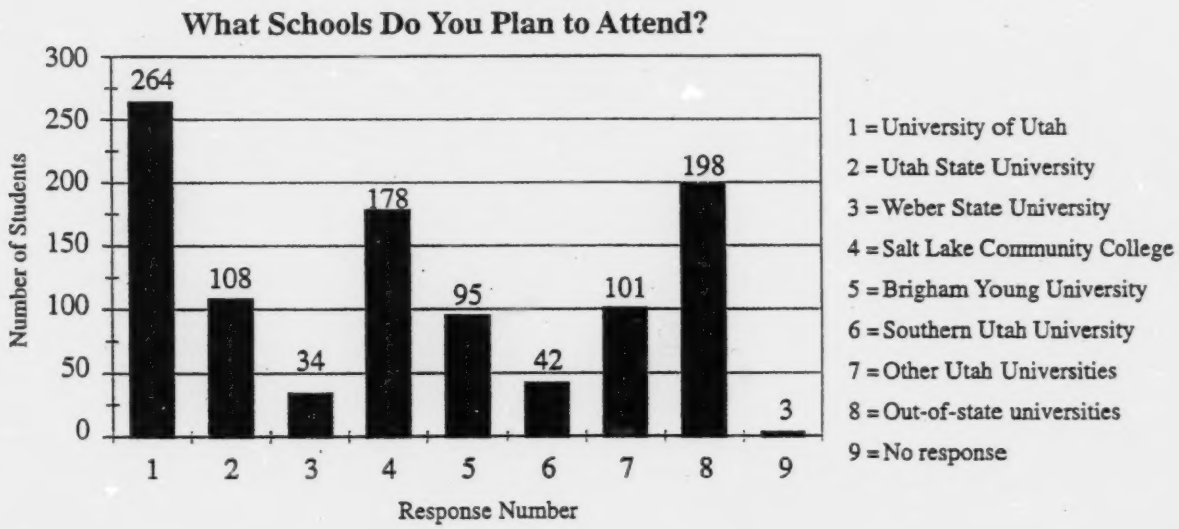


Figure 8: Schools students plan to attend in their post-high school education.

If the total number students in columns one through nine are added together, the resulting number of responses totals 1,023. This number of responses exceeds the sample size of 604. For this particular question, students were allowed to put down more than one school that they planned to attend. Therefore, 1,023 responses were obtained to this particular question.

As seen above in Figure 8, 178 students responded that they would attend Salt Lake Community College. In comparison, 264 students plan to attend the University of Utah in their educational career. The numbers shown in this figure can be misleading. This graph does not suggest that students will be attending only one institution during their entire educational career. They may be planning to attend more than one institution in their post-secondary education. For example, a student may plan to begin at SLCC, obtain an associates degree, then transfer to the University of Utah. Therefore, they would list "Salt Lake Community College" and "University of Utah" as their answers to this question. Figure 9 below supports this interpretation.

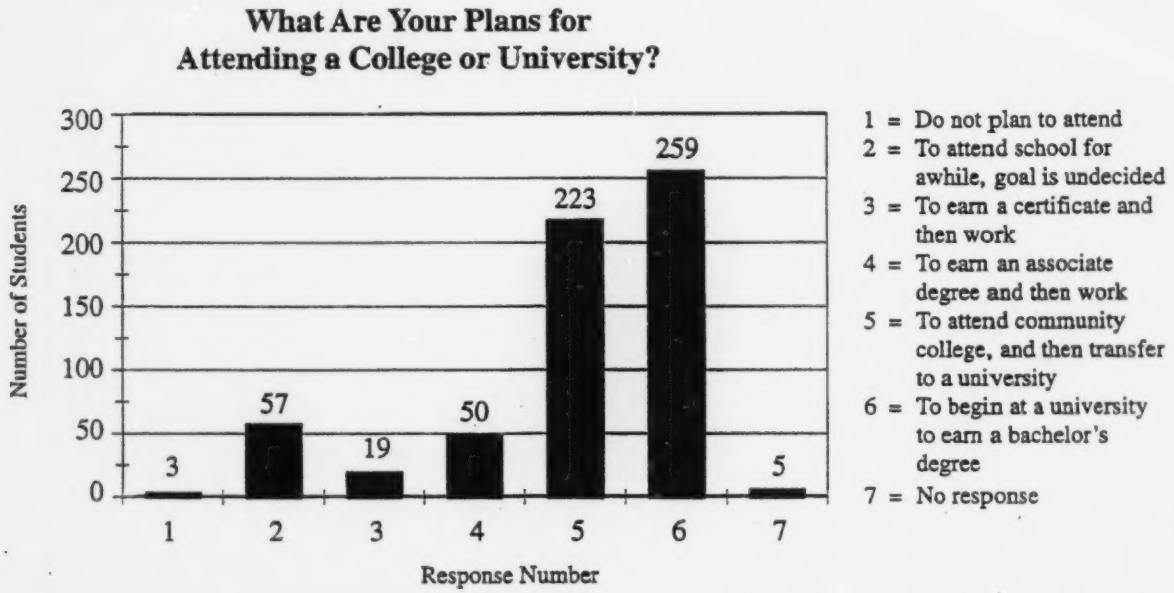


Figure 9: Students' plans while attending a college or university.

According to Figure 9 above, the large number of students who plan to begin at a university to earn a bachelor's degree would be attending the University of Utah and all other four-year schools listed in Figure 8. This number does not represent students who begin at a two-year school and transfer to a four-year school. Column five represents all those transfer students who begin at a community college and transfer to a university. Columns three and four also include students who will be beginning at a community or vocational college. The total number of student beginning at a two-year school is 292. The 292 students who plan to begin their post-high school education at a two-year school is greater than the 259 students who plan to begin at a four-year school.

General Conclusions

The information in this survey indicates that the majority of concurrent enrollment students have been very satisfied with classes in this program. In addition, the majority of students reported that concurrent enrollment has positively influenced their decision to attend college. More than one-half of all students surveyed plan to begin at a two-year college. These results are encouraging. As the concurrent enrollment program grows, it appears that Salt Lake Community College can look forward to increasing enrollments.

1999
Answers to the Most Frequently Asked Questions about Concurrent Enrollment

Salt Lake Community College
Department of Concurrent Enrollment

Introduction

Since the inception of the Concurrent Enrollment Program, a number of questions and issues have been raised concerning quality and effectiveness of the program for students. In response to these concerns, the Concurrent Enrollment Department has been conducting research which provides answers for these questions and clarifies program issues.

Background

The Concurrent Enrollment Program offers college-level courses to students for both high school and college credit. In the Salt Lake Valley, Salt Lake Community College administers this program, providing both liberal and vocational education courses to students. The program began in 1989 at Salt Lake Community College and now serves twenty-five high schools in five school districts.

Procedure

The Concurrent Enrollment Department used a stratified random sample to generate 1,097 student records. It systematically chose four years containing pertinent information from the ten years of the program's existence.

From each of these four years, the department chose a semester to represent that year. Random samples were taken from each quarter/semester. These samples included all school districts and different course offerings.

Beginning with Fall 1997, the representative quarter/semester for that year, the random number generator identified 559 students from an enrollment of 4,980. For the Fall of 1995, 303 students were identified from an enrollment of 4,980. For the Fall of 1995, 303 students were identified from an enrollment of 2,251. For the Spring of 1994, 147 students were identified from 1,364. For the Spring of 1992, 88 were identified from 846.

Analyses and Conclusions

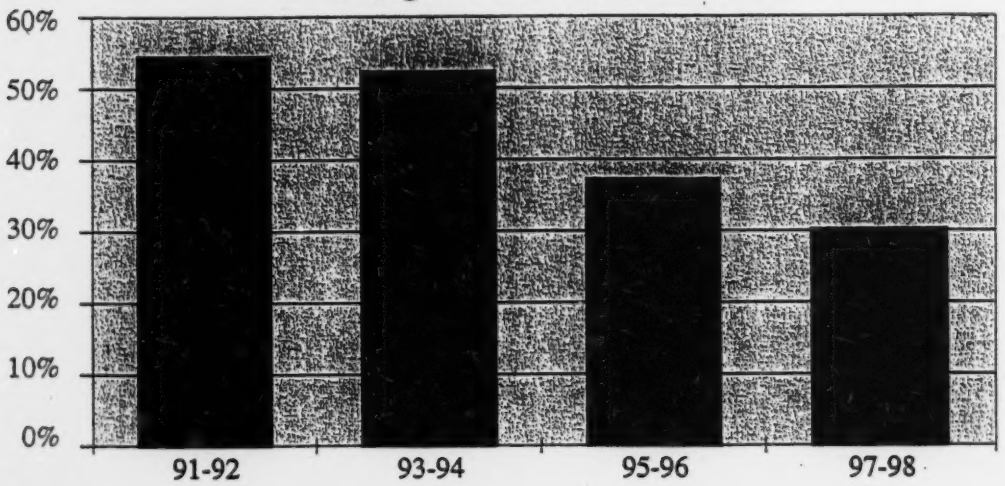
The department responded to six research questions generated by SLCC administrators, Board of Regents, legislative officials, and other agencies.

The question most frequently asked was, **"What percentage of concurrent enrollment students attended SLCC after graduation from high school?"** Research indicated the following percentages:

1991-92 - 55%
1993-94 - 52%
1995-96 - 37%
1997-98 - 30% (as of Summer Semester, 1999)

Although this information appears to indicate a decline in percentage, an analysis of it reveals that students may not initially enroll at SLCC, but after various life experiences a great many eventually do become students. Specifically, the information indicates as much as a two- to three-year gap between high school graduation and college registration (see graph below).

Cumulative Percent of CE Students Attending SLCC as of Summer 1999

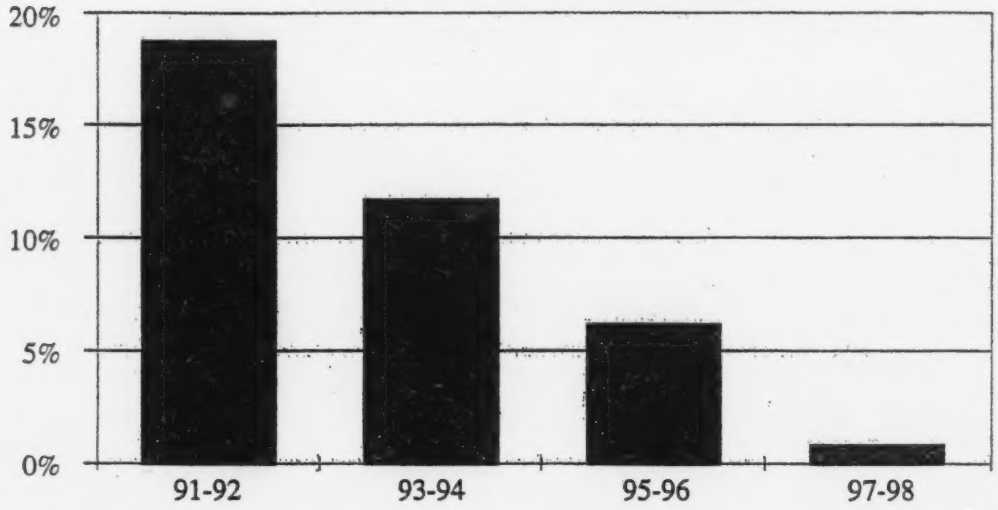


As the above graph illustrates, the longer the students have been out of high school, the more likely they are to become students at SLCC. It is important to realize that students don't always begin their post secondary education right after graduating from high school. Students may work, attend other institutions of higher education, serve in the military, complete missions, marry and/or start families. The graph indicates specific percentages of concurrent enrollment students who have or are currently attending SLCC. For a more complete understanding, future research should be conducted to compare these percentages to those of the general high school population.

The second question asked was, "**How many students were influenced to attend SLCC by a concurrent enrollment course**?" According to a survey of concurrent enrollment students conducted spring of 1999, 59% responded that they would attend SLCC at some point in their college careers. This information confirms our findings from the student records that, indeed, over 50% of concurrent enrollment students have continued their college education at SLCC.

The third the question was, "**What percentage of concurrent enrollment students who enter SLCC have completed a degree**?" (Note that the department used spring of 1999 as the latest date to measure all degrees earned.) In 1991-92, nearly 19% received associates degrees; in 1993-94, 12% received associates degrees; 1995-96, 6% received associates degrees. Although most members of the class of 1997-98 have not had the time to complete a degree by the spring of 1999, one student has been able to complete requirements for a degree because of his participation in the Concurrent Enrollment Program (see graph below).

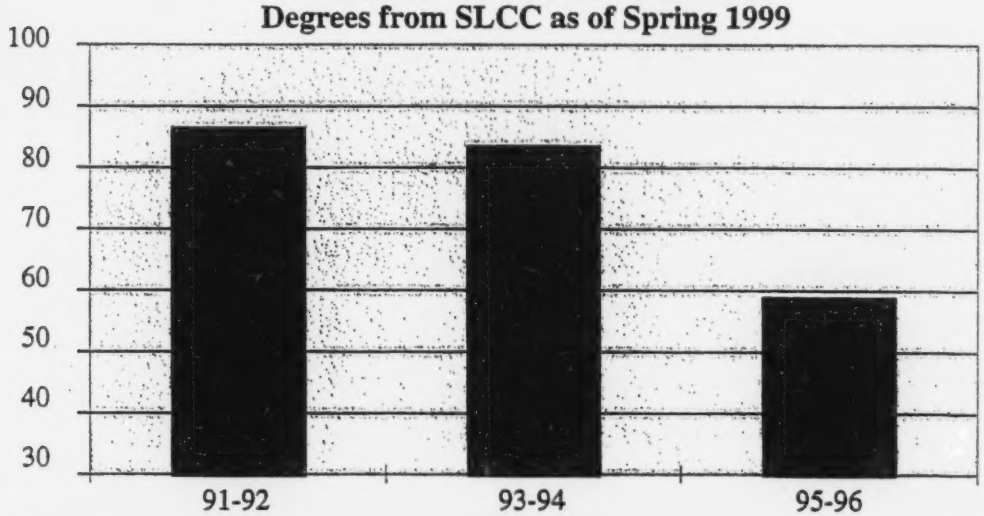
Percent of CE Students Receiving Associate Degrees as of Spring 1999



This statistical sample shows a trend similar to the trend for attending SLCC after graduation. Time, once more, is an important factor. The longer the students have been out of high school, the more likely they are to earn a degree.

In the following graph, the department took these percentages further and estimated the number of students, previously enrolled in concurrent enrollment, who would be receiving an associate degree from SLCC by Spring, 1999. 1998 projections were not made because sufficient data was not available.

Estimated CE Students Receiving Degrees from SLCC as of Spring 1999



Fourth, the question was, **"What is the average number of concurrent enrollment hours that students are taking?"** Our research indicated the following averages:

1991-92 - 13 quarter hours
1993-94 - 16 quarter hours
1995-96 - 13 quarter hours
1997-98 - 12 quarter hours

According to this information, a student takes an average of three to four concurrent enrollment classes before high school graduation.

Fifth, the question was, "**How does a student's performance in concurrent enrollment classes compare with his/her performance in classes on SLCC campuses?**" In general, the GPAs of students in concurrent enrollment are comparable to those they receive while attending SLCC. The research shows only slight differences, generally within the range of 0.3 grade points.

Sixth, the question was, "**How does the program maintain and monitor academic standards of higher education in Utah?**" High school instructors who teach concurrent enrollment courses must meet the same academic requirements as SLCC faculty. Concurrent enrollment courses use the same curriculum, syllabi, and textbooks as those taught on SLCC campuses. Thus, concurrent enrollment courses are equivalent to those taught at SLCC.

Standardization in course curriculum testing and grading criteria assures and maintains the quality of concurrent courses. Each department offering concurrent enrollment courses determines this standardization. The math and English departments require a placement test which is administered by full-time liaisons. Some departments utilize standardized tests to monitor course content. For example, the math department administers the departmental final exam to all concurrent enrollment students. These students must demonstrate the same level of competence as regular SLCC math students. In other departments instructors create and administer their own assessment system. A staff of seven full-time and 55 part-time faculty liaisons make regular classroom visits, assisting and monitoring this process to maintain quality control. In addition liaisons conduct in service training for instructors in their specific subject areas.

Conclusion

The Concurrent Enrollment Program, as administered by SLCC, complies with guidelines established by the state legislature and, according to historical research, encourages students to continue in higher education after high school graduation.

Salt Lake Community College

HIGH SCHOOL SURVEY FOR CONCURRENT ENROLLMENT

(1) Name: _____ (2) ❑ Male ❑ Female

(3) Mailing zip code _____ (4) Grade: ❑ 10 ❑ 11 ❑ 12

(5) School: _____ (6) Date of birth (mm/dd/yy) _____

(7-8) Choose one or two numbers from the following options that best describe your plans for the first six months after you graduate from high school.

Mark your number choice (7) #_____ and/or (8) #_____

1. work
2. military
3. mission
4. marriage
5. 4-yr. university
6. 2-yr. college
7. occupational training
8. don't know
9. other _____

(9-10) Choose one or two numbers from the previous options that best describe your plans for the first year after you graduate from high school.

Mark your number choice (9) #_____ and/or (10) #_____

(11) How have the Concurrent Enrollment classes you have taken affected your decision to attend college? (Check the most appropriate.)

❑ encouraged me ❑ discouraged me ❑ no effect

(12) What are your plans for attending a college or university?

❑ Do not plan to attend.
❑ To attend school for a while; goal is undecided.
❑ To earn a certificate (a program for 2 years or less) and then work.
❑ To earn an associate degree (2 - 3 years) and then work.
❑ To attend a community college, and then transfer to a university.
❑ To begin at a university to earn a bachelors degree (4 - 5 years)

(13) If you plan on attending a college or university, please name the schools you plan to attend:

_____

(14) If you plan to attend a college or university, what major or principle area of study do you plan to pursue?

❑ Science/Engineering ❑ Computers ❑ Legal Studies
❑ Art, Music, Drama ❑ Social Work/Education ❑ Business
❑ Health/Medicine ❑ English/Journalism ❑ Foreign Language
❑ Vocational/Technical ❑ Undecided ❑ Other _____

Please turn page and complete survey.

(15) Had you qualified to take a college course that was not offered as Concurrent Enrollment at your high school, would you have left your high school campus to take the course at one of the SLCC campuses? ❑ Yes ❑ No

If yes, which course? _____

(16) If you marked "Yes" for the previous question, would you be have been willing to pay $200 - $300 tuition and fees per class like regular SLCC students? ❑ Yes ❑ No

(17) Have you taken any Advanced Placement (AP) classes at high school? ❑ Yes ❑ No

(18) How do you feel about the Concurrent Enrollment classes that you have taken?
❑ completely satisfied ❑ very satisfied ❑ satisfied ❑ unsatisfied

(19) How do you feel about the course work required for the Concurrent Enrollment classes that you have taken?
❑ very difficult ❑ difficult ❑ average ❑ easy ❑ very easy

(20) How do you feel about the regular high school classes that you have taken?
❑ completely satisfied ❑ very satisfied ❑ satisfied ❑ unsatisfied

(21) How do you feel about the course work required in the regular high school classes you have taken?
❑ very difficult ❑ difficult ❑ average ❑ easy ❑ very easy

(22) Do you think the Concurrent Enrollment classes that you have taken had adequate equipment and supplies to use? ❑ Yes ❑ No

(23) Would you recommend Concurrent Enrollment classes to other high school students?
❑ definitely yes ❑ probably yes ❑ probably not ❑ definitely not

(24) What suggestions do you have to improve the Concurrent Enrollment program?

_____

_____

_____

_____

Salt Lake Community College

CONCURRENT ENROLLMENT FACT SHEET

Program Information:

- Concurrent enrollment has contracts with Granite, Jordan, Murray, Salt Lake City, and Tooele School Districts. Davis School District offers limited courses under a "First Right of Refusal" from Weber State University. Private schools have indicated interest, but at this time are not participating.

- Concurrent Enrollment courses are taught in 25 high schools, including the Jordan School District Technical Center. Over 200 high school instructors have been approved to teach Concurrent Enrollment courses.

- Concurrent Enrollment offers courses in the following subject areas: Accounting, Architectural Technology, Astronomy, Automotive Technology, Aviation, Biology, Building Construction, Business, Business Information Technology, Carpentry, Chef's Apprenticeship, Chemistry, Computer Aided Drafting, Computer Information Systems, Computer Science, Communications, Criminal Justice, Customer Service Technology, Economics, English, Environmental Technology, Family and Human Studies, Finance, Fine Arts, French, Geography, Geology, German, Health, History, Humanities, Journalism, Machinery, Marketing, Mathematics, Medical Terminology, Music Appreciation, Physics, Pottery, Printing/Desktop Publishing, Psychology, Spanish, Stagecraft, Visual Art & Design, Welding.

- 1989-1990: 758 enrollments in 110 class sections, averaging 7 students per section.
- 1990-1991: 1,283 enrollments in 108 class sections, averaging 12 students per section, 69% growth.
- 1991-1992: 2,135 enrollments in 259 class sections, averaging 8 students per section, 66% growth.
- 1992-1993: 2,299 enrollments in 223 class sections, averaging 10 students per section, 8% growth.
- 1993-1994: 2,822 enrollments in 242 class sections, averaging 12 students per section, 23% growth.
- 1994-1995: 2,953 enrollments in 158 class sections, averaging 19 students per section, 5% growth.
- 1995-1996: 5,639 enrollments in 282 class sections, averaging 20 students per section, 91% growth.
- 1996-1997: 8,215 enrollments in 440 class sections, averaging 19 students per section, 46% growth.
- 1997-1998: 9,493 enrollments in 538 class sections, averaging 18 students per section, 16% growth.
- 1998-1999: 11,560 enrollments in 688 class sections, averaging 17 students per section, 22% growth.

Quality Control Efforts Include:

- Concurrent Enrollment students use the same course syllabi and textbooks as regular SLCC students, take approved equivalent exams, and complete Math and English placement testing.

- Concurrent Enrollment instructors must meet the same hiring requirements as SLCC faculty.

- Concurrent Enrollment instructors attend orientations, training and faculty meetings at the SLCC campus.

- Seven full-time Concurrent Enrollment liaisons and 55 part-time SLCC faculty liaisons monitor concurrent enrollment courses. The full-time liaisons also teach on campus as SLCC faculty.

Program Objectives:

- Courses facilitate the transition from high school to SLCC and students get a head start on college.
- Duplication of classes is reduced, shortening the time necessary to earn a degree.
- Students can develop study habits and critical thinking skills essential to college success.
- New challenges are added to the senior year.
- Undecided students can determine if college is right for them.

8/99

APPENDIX C

courses and credit hours, that count, that don't count

Numb crses	Cr hrs	crses count	cr hr count	crses no count	cr hr no count	% crses count	% cr hr count	% crses no count	% cr hr no count	Total % cousrse	Total % cr hrs
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	6			2	6	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
4	17	3	14	1	3	75.00%	82.35%	25.00%	17.65%	100.00%	100.00%
7	25	7	25			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
5	17	5	17			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	22	2	10	1	12	66.67%	45.45%	33.33%	54.55%	100.00%	100.00%
3	9	2	6	1	3	66.67%	66.67%	33.33%	33.33%	100.00%	100.00%
6	27	5	25	1	2	83.33%	92.59%	16.67%	7.41%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
6	29	6	29			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	15	3	15			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
5	25	5	25			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
5	24	5	24			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
10	33	10	33			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	19	4	19			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	9	2	9			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
6	24	6	24			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	11	2	10	1	1	66.67%	90.91%	33.33%	9.09%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	9	2	9			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
8	37	2	7	6	30	25.00%	18.92%	75.00%	81.08%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	18	4	18			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
5	25	5	25			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	12	3	12			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	7	2	7			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	13	2	9	1	4	66.67%	69.23%	33.33%	30.77%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	14	3	14			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	18	4	18			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	13	3	13			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	13	3	13			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	9	2	9			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	17	2	10	1	7	66.67%	58.82%	33.33%	41.18%	100.00%	100.00%
2	18			2	18	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	17	4	17			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	18	4	18			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
6	30	3	12	3	18	50.00%	40.00%	50.00%	60.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%

3	14	3	14			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
5	19			5	19	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
5	22	3	15	2	7	60.00%	68.18%	40.00%	31.82%	100.00%	100.00%
3	8			3	8	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	8	1	5	1	3	50.00%	62.50%	50.00%	37.50%	100.00%	100.00%
2	9			2	9	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
5	25	5	25			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
7	24	7	24			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
5	16			5	16	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
11	45	11	45			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
6	22	6	22			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
7	24	7	24			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	9	2	9			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
8	36	8	36			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
7	29	5	24	2	5	71.43%	82.76%	28.57%	17.24%	100.00%	100.00%
8	29	8	29			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	19	4	19			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
5	20	3	12	2	8	60.00%	60.00%	40.00%	40.00%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	15	3	15			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	15	3	15			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	17	2	10	2	7	50.00%	58.82%	50.00%	41.18%	100.00%	100.00%
1	5			1	5	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
5	20	5	20			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	3			1	3	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	16	4	16			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	9			2	9	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
2	8			2	8	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	20	4	20			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4			1	4	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	9			4	9	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
3	18			3	18	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	15	3	15			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	9	2	9			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	12	2	12			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	8	2	8			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	9	2	9			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
4	19	4	19			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	10			3	10	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%

courses and credit hours, that count, that don't count

1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
7	25	7	25			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	14	3	14			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	8	2	8			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	4	1	4			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
3	13	3	13			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	10	2	10			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
9	35	9	35			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
6	30	6	30			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	3	1	3			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
2	8			2	8	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%
1	5	1	5			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
6	30	6	30			100.00%	100.00%	0.00%	0.00%	100.00%	100.00%
419	1822	356	1562	63	260	84.96%	85.73%	15.04%	14.27%	100.00%	100.00%

List of courses taken concurrently, year and quarter taken

year and quarter	course number	credit hours
19904	MGT 110 50	3
19904	MGT 110 50	3
19912	OIS 112 50	5
19912	OIS 235 50	3
19912	OIS 131 50	2
19912	ACCT102 57	4
19912	MTH 105 53	5
19912	MTH 105 53	5
19912	CIS 140 57	3
19912	CIS 140 55	3
19912	ENG 099 47	4
19912	ENG 101 47	4
19912	ACCT102 56	4
19912	MTH 106 66	5
19912	ENG 250 47	5
19912	OIS 140 50	3
19912	OIS 155 50	3
19912	CIS 140 57	3
19912	CIS 140 55	3
19912	OIS 140 50	3
19912	ACCT102 57	4
19912	OIS 155 50	3
19912	OIS 187 50	3
19912	CIS 140 57	3
19913	MTH 106 06	5
19913	FIN 200 57	3
19913	MTH 106 06	5
19914	BIOL101 50	5
19914	CHEM141 05	5
19914	CIS 155 07	3
19914	SPN 101 11	5
19914	ELC 116 03	4
19914	ACCT101 33	4
19914	MGT 101 17	4
19914	ECD 110 05	5
19914	ACCT101 28	4
19914	CIS 155 07	3
19914	ECN 105 02	5
19914	FIN 200 05	3
19914	MGT 101 17	4
19914	HU 101 15	5
19914	FIN 121 07	3
19914	MGT 101 19	4
19914	CD 113 08	5
19914	MTH 105 22	5
19914	ACCT101 32	4

List of courses taken concurrently, year and quarter taken

19914	CST 101 04	3
19914	SPN 101 11	5
19914	MGT 101 17	4
19914	SPN 101 11	5
19921	SPN 102 08	5
19921	MKTG103 10	5
19921	MKTG103 11	5
19921	HU 101 20	5
19921	SPN 102 08	5
19922	ECN 202 08	4
19922	CHEM142 06	5
19922	PRT 101 04	7
19922	ELET103 05	12
19922	SPN 103 08	5
19922	MTH 106 12	5
19922	CD 140 10	3
19922	ENG 101 50	4
19922	CIS 140 12	3
19922	MTH 106 13	5
19922	SPN 103 08	5
19922	COM 110 70	3
19922	AT 105 07	5
19922	MTH 105 27	5
19922	MTH 106 16	5
19922	ECN 202 10	4
19922	PSY 101 26	5
19922	FIN 120 14	4
19922	MTH 105 24	5
19922	ELET103 03	12
19922	FIN 120 14	4
19922	MTH 106 16	5
19923	MTH 106 04	5
19924	SPN 101 12	5
19924	MTH 101 29	5
19924	ENG 101 67	4
19924	CD 113 06	5
19924	COM 110 40	3
19924	MTH 105 30	5
19924	MTH 105 27	5
19924	MTH 105 28	5
19924	GD 128 01	3
19924	SPN 101 12	5
19924	SPN 101 11	5
19924	GD 128 01	3
19924	GD 104 02	3
19924	MTH 105 30	5
19924	FA 110 06	3
19924	FIN 121 17	3

List of courses taken concurrently, year and quarter taken

19924	SPN 101 12	5
19924	SPN 101 12	5
19924	ACCT101 17	4
19924	ACCT101 17	4
19924	MTH 105 26	5
19924	GD 123 05	3
19924	FIN 121 17	3
19924	GD 116 05	3
19924	SPN 101 11	5
19924	HU 101 17	5
19924	BIOL101 50	5
19924	SPN 101 12	5
19931	SPN 102 07	5
19931	SPN 102 08	5
19931	MTH 105 26	5
19931	MTH 105 26	5
19931	SPN 102 08	5
19931	SPN 102 08	5
19931	ELET113 06	6
19931	MTH 105 25	5
19931	SPN 102 08	5
19931	MTH 105 25	5
19931	SPN 102 07	5
19931	SPN 102 08	5
19931	MTH 105 26	5
19932	CIS 140 18	3
19932	GD 228 17	2
19932	CIS 140 18	3
19932	MTH 106 30	5
19932	ACCT102 18	4
19932	ACCT102 18	4
19932	SPN 103 30	5
19932	PRT 101 17	7
19932	CIS 140 17	3
19932	MTH 105 30	5
19932	MTH 105 31	5
19932	OIS 235 15	3
19932	GD 259 17	2
19932	GD 123 17	3
19932	GD 116 17	3
19932	MTH 106 15	5
19932	SPN 103 30	5
19932	SPN 103 30	5
19932	CIS 102 58	4
19932	CD 140 58	3
19932	GD 259 17	2
19932	ENG 101 50	4
19932	SPN 103 17	5

List of courses taken concurrently, year and quarter taken

19932	MTH 106 16	5
19932	MTH 106 30	5
19932	HU 101 20	5
19932	OIS 232 15	5
19932	OIS 131 15	2
19932	FA 110 04	3
19932	MTH 106 16	5
19932	MTH 106 31	5
19932	SPN 103 30	5
19932	MTH 106 16	5
19932	SPN 103 30	5
19932	CIS 140 17	3
19934	CIS 155 17	3
19934	CIS 140 20	3
19934	MTH 105 39	5
19934	CBR 111 51	5
19934	BIOL101 50	5
19934	MKTG103 30	5
19934	MKTG103 30	5
19934	ENG 101 70	4
19934	FIN 200 17	3
19934	COM 140 17	3
19934	CBR 110 51	5
19934	HU 101 31	5
19934	SPN 101 12	5
19934	GD 128 06	3
19934	ACCT101 18	4
19934	CIS 140 18	3
19934	COM 140 17	3
19934	FIN 121 19	3
19934	MTH 101 39	5
19934	FIN 200 17	3
19934	CIS 155 17	3
19934	ACCT101 19	4
19934	MTH 105 39	5
19934	MKTG103 30	5
19934	ELET101 06	6
19934	LS 110 50	3
19934	BIOL101 51	5
19934	COM 110 50	3
19934	HU 101 31	5
19934	CD 113 31	5
19934	BIOL101 51	5
19934	CIS 140 20	3
19941	CBR 120 51	5
19941	ACCT101 18	4
19941	PSY 101 65	5
19941	ELET101 10	6

List of courses taken concurrently, year and quarter taken

19941	ACCT102 18	4
19941	COM 141 10	3
19941	COM 141 10	3
19941	MTH 105 51	5
19941	MKTG103 10	5
19941	SPN 102 10	5
19941	PSY 101 50	5
19941	BIOL205 50	5
19941	ELET102 10	6
19941	CBR 121 51	5
19941	ELET113 10	6
19941	COM 110 46	3
19941	MTH 105 53	5
19941	MTH 105 53	5
19941	ACCT101 18	4
19942	ENG 101 52	4
19942	ENG 101 56	4
19942	FA 110 05	3
19942	MTH 106 22	5
19942	CD 113 34	5
19942	SPN 103 20	5
19942	COM 142 21	3
19942	AT 110 34	4
19942	GEOG101 10	5
19942	MTH 101 34	5
19942	CIS 140 19	3
19942	ENG 101 56	4
19942	CIS 155 18	3
19942	HU 101 30	5
19942	MTH 106 22	5
19942	MTH 106 22	5
19942	MKTG103 16	5
19942	MTH 105 34	5
19942	COM 120 51	4
19942	ACCT102 19	4
19942	ENG 101 53	4
19942	AT 110 04	4
19942	CBR 130 51	5
19942	ELET102 06	6
19942	CIS 102 90	1
19942	MTH 106 22	5
19942	PHY 127 10	5
19942	AVN 110 10	5
19942	FIN 120 20	4
19942	CIS 102 93	1
19942	MKTG103 10	5
19942	CBR 131 51	5
19942	COM 142 21	3

List of courses taken concurrently, year and quarter taken

19942	CIS 102 92	1
19942	CIS 102 91	1
19942	FIN 138 18	5
19942	MTH 105 30	5
19942	MKTG103 16	5
19942	MTH 106 21	5
19942	CD 140 10	3
19942	GD 129 21	4
19942	FIN 138 18	5
19942	AVN 110 09	5
19942	MGT 101 16	4
19942	MKTG103 10	5
19942	MTH 106 22	5
19942	FIN 120 20	4
19942	MGT 101 15	4
19942	GEOG101 10	5
19943	FIN 200 18	3
19943	FIN 200 19	3
19944	CD 113 30	5
19944	MTH 106 68	5
19944	MTH 105 67	5
19944	FIN 121 17	3
19944	ENG 101 67	4
19944	CD 113 10	5
19944	HU 101 31	5
19944	HU 101 31	5
19944	MTH 105 67	5
19944	ACCT101 19	4
19944	MTH 105 75	5
19944	ENG 101 76	4
19944	FIN 121 17	3
19944	COM 140 17	5
19944	GD 130 10	4
19944	CIS 102 52	4
19944	CIS 155 18	3
19944	GD 129 07	4
19944	MTH 105 67	5
19944	MTH 105 67	5
19944	GD 126 10	3
19944	ENG 101 78	4
19944	MTH 106 68	5
19944	FIN 121 17	3
19944	ENG 101 78	4
19944	ACCT101 19	4
19944	ENG 101 75	4
19944	ACCT101 19	4
19944	CIS 102 51	4
19944	FIN 121 18	3

List of courses taken concurrently, year and quarter taken

19944	MTH 101 50	5
19944	ENG 101 66	4
19944	COM 140 17	5
19944	ACCT101 18	4
19944	MTH 106 68	5
19944	HU 101 30	5
19951	MTH 105 47	5
19951	MTH 105 46	5
19951	MKTG103 15	5
19951	COM 141 64	5
19951	MKTG103 15	5
19951	FIN 121 30	3
19951	COM 141 64	5
19952	ACCT102 25	4
19952	ELET113 35	6
19952	PRT 101 17	7
19952	CIS 102 25	4
19952	CD 140 05	3
19952	CD 140 35	3
19952	MTH 106 45	5
19952	ENG 130 10	4
19952	GD 172 17	3
19952	GD 228 17	2
19952	HU 101 35	5
19952	HU 101 27	5
19952	MTH 106 45	5
19952	CIS 102 25	4
19952	GEOL101 57	5
19952	FIN 120 24	4
19952	ACCT102 25	4
19952	CIS 102 24	4
19952	ACCT102 24	4
19952	FIN 120 23	4
19952	AUT 121 45	5
19952	COM 142 17	5
19952	AUT 120 45	7
19952	MTH 105 41	5
19952	ENG 101 56	4
19952	ENG 130 10	4
19952	ENG 250 16	5
19952	MTH 106 45	5
19952	MTH 106 15	5
19952	MTH 105 58	5
19952	BUS 105 30	5
19952	MA 110 16	5
19952	CIS 102 25	4
19952	COM 142 17	5
19952	ACCT102 25	4

List of courses taken concurrently, year and quarter taken

19952	ENG 250 16	5
19952	FA 110 10	3
19954	ENG 101 87	4
19954	CIS 102 46	4
19954	MKTG103 12	5
19954	GEOG101 25	5
19954	CIS 155 11	3
19954	FIN 200 06	3
19954	MTH 105 76	5
19954	HU 101 42	5
19954	FIN 200 06	3
19954	SPN 101 17	5
19954	MKTG103 11	5
19954	CIS 155 11	3
19954	COM 140 21	5
19954	FIN 200 06	3
19954	CIS 155 10	3
19954	HU 101 41	5
19954	MKTG103 09	5
19954	MKTG103 10	5
19954	HU 101 43	5
19954	MTH 105 75	5
19954	HU 101 42	5
19954	CIS 102 44	4
19954	MTH 105 76	5
19954	CIS 102 42	4
19954	COM 143 07	5
19954	HU 101 42	5
19954	FIN 200 06	3
19954	MTH 105 67	5
19954	ENG 101 87	4
19954	CIS 155 11	3
19954	GER 101 07	5
19954	SPN 101 17	5
19954	SPN 101 17	5
19961	SPN 102 21	5
19961	GER 102 05	5
19961	SPN 102 21	5
19961	ITP 131 05	3
19961	MKTG103 15	5
19961	SPN 102 21	5
19962	MKTG109 20	5
19962	FIN 120 50	4
19962	COM 142 84	5
19962	SPN 103 83	5
19962	ENG 250 82	5
19962	CIS 102 55	4
19962	ENG 101 76	4

List of courses taken concurrently, year and quarter taken

19962	ENG 101 77	4
19962	MTH 106 24	5
19962	PRT 142 81	5
19962	PRT 115 81	4
19962	MKTG109 19	5
19962	GD 228 81	2
19962	FIN 120 51	4
19962	GER 103 81	5
19962	SPN 103 81	5
19962	CIS 155 05	3
19962	MTH 106 22	5
19962	FIN 120 51	4
19962	BUS 105 35	5
19962	FIN 120 51	4
19962	ENG 101 76	4
19962	MTH 106 25	5
19962	MTH 106 25	5
19962	ENG 101 81	4
19962	GD 259 81	2
19962	ENG 101 76	4
19962	FIN 105 20	5
19962	SPN 103 83	5
19962	FIN 105 21	5
19964	GEOG160 87	5
19964	MKTG103 87	5
19964	HU 101 84	5
19964	MTH 101 86	5
19971	MKTG200 86	3
19971	MTH 105 86	5
19972	PHY 127 50	5
19972	ENG 101 62	4
19972	GD 114 62	4
19972	MTH 106 59	5
19972	CIS 155 57	3
19972	CIS 155 55	3

Degree	Crse T	Crse Section	Cr Hrs	Grade			Cr Hr	Cours	Cnt H	Cnt Cr	No Cr	No Cr
AS	19934	MTH 105 35	5	B	1	1	5	1	5	1		
AS	19952	HU 101 35	5	B+	1	1	5	1	5	1		
AS	19964	MTH 105 75	5	C-	1	1	5	1	5	1		
AS	19924	BIOL101 50	5	B	1	1	5	1	5	1		
AS	19934	FA 110 15	3	A-	1	1	3	1	3	1		
AS	19954	BUS 101 30	4	A-	1	1	4	1	4	1		
AS	19952	HU 101 28	5	A	1	1	5	1	5	1		
AS	19964	HU 101 91	5	A-	1	1	5	1	5	1		
AS	19941	MTH 105 51	5	A	1	1	5	1	5	1		
AS	19964	BUS 101 98	4	A	1	1	4	1	4	1		
AS	19952	HU 101 35	5	B	1	1	5	1	5	1		
AA	19912	MTH 106 66	5	A	1	1	5	1			5	1
AS	19944	MTH 106 68	5	B+	1	1	5	1			5	1
AAS	19922	MTH 105 27	5	B+	1	1	5	1	5	1		
AS	19964	MA 110 66	3	A	1	1	3	1			3	1
AS	19964	MTH 106 86	5	C-	1	1	5	1			5	1
AS	19972	GD 116 61	3	B	1	1	3	1			3	1
AS	19962	MA 110 20	3	A	1	1	3	1			3	1
AS	19964	HU 101 94	5	B+	1	1	5	1	5	1		
AS	19962	MTH 101 81	5	B+	1	1	5	1	5	1		
AS	19944	MTH 106 68	5	C	1	1	5	1			5	1
AS	19912	CIS 140 57	3	A-	1	1	3	1			3	1
AS	19954	CIS 102 45	4	A	1	1	4	1	4	1		
AS	19934	FA 110 15	3	A-	1	1	3	1	3	1		
CR	19961	MTH 105 78	5	A	1	1	5	1	5	1		
AS	19944	MTH 105 76	5	B	1	1	5	1	5	1		
AS	19964	CIS 102 91	4	A	1	1	4	1	4	1		
AS	19974	HU 101 84	5	A-	1	1	5	1	5	1		
AS	19942	MKTG103 16	5	B	1	1	5	1			5	1
AS	19962	MKTG103 21	5	B+	1	1	5	1			5	1
AS	19932	MTH 106 30	5	B	1	1	5	1			5	1
AS	19974	ENG 101 80	4	A-	1	1	4	1	4	1		
AAS	19964	ENG 101 89	4	A	1	1	4	1	4	1		
AS	19964	CIS 102 51	4	B	1	1	4	1	4	1		
AS	19944	MTH 105 76	5	B	1	1	5	1	5	1		
AS	19964	PSY 101 80	5	B	1	1	5	1	5	1		
AS	19952	HU 101 35	5	B+	1	1	5	1	5	1		
AS	19922	MGT 101 18	4	A-	1	1	4	1	4	1		
AS	19964	MA 110 50	3	A	1	1	3	1			3	1
AA	19944	AT 110 10	4	A	1	1	4	1			4	1
AAS	19952	AVN 110 06	5	B+	1	1	5	1	5	1		
AAS	19932	MTH 106 30	5	B	1	1	5	1			5	1
AS	19944	GD 259 07	2	B	1	1	2	1			2	1
AS	19932	CIS 140 51	3	C+	1	1	3	1	3	1		
AS	19921	MTH 105 24	5	B	1	1	5	1	5	1		
AS	19964	MTH 105 81	5	B	1	1	5	1	5	1		
AS	19982	ACCT101 51	4	A	1	1	4	1	4	1		
CR	19954	MTH 106 20	5	C+	1	1	5	1			5	1
AS	19941	MKTG103 10	5	C-	1	1	5	1	5	1		
AS	19934	CIS 140 29	3	C	1	1	3	1	3	1		
AS	19974	MTH 105 92	5	B	1	1	5	1	5	1		
AS	19982	ENG 101 64	4	A	1	1	4	1	4	1		
AS	19912	FIN 120 54	4	B	1	1	4	1	4	1		

AS	19934	FA 110 15	3	B+	1	1	3	1	3	1		
AAS	19964	HU 101 84	5	A-	1	1	5	1	5	1		
AS	19974	OIS 107 50	3	A-	1	1	3	1			3	1
AAS	19952	CHEF111 06	5	A	1	1	5	1	5	1		
AS	19942	MTH 105 35	5	D	1	1	5	1	5	1		
AS	19932	GEOL111 52	5	C	1	1	5	1	5	1		
AAS	19934	GD 128 06	3	A	1	1	3	1	3	1		
CR	19934	BIOL101 51	5	B	1	1	5	1	5	1		
AS	19962	MA 110 20	3	B+	1	1	3	1	3	1		
AAS	19922	MTH 105 23	5	C+	1	1	5	1	5	1		
AS	19974	MTH 105 88	5	D	1	1	5	1	5	1		
AS	19942	FA 110 05	3	A-	1	1	3	1	3	1		
AS	19944	GD 128 05	3	A	1	1	3	1	3	1		
AS	19954	HU 101 43	5	B-	1	1	5	1	5	1		
AS	19972	OIS 138 50	5	A	1	1	5	1			5	1
AS	19962	CIS 102 55	4	A	1	1	4	1	4	1		
AS	19954	CD 140 10	3	A-	1	1	3	1			3	1
AS	19964	HU 101 93	5	A-	1	1	5	1	5	1		
AS	19964	MTH 105 82	5	A	1	1	5	1	5	1		
AS	19952	FA 110 10	3	B	1	1	3	1	3	1		
AS	19954	MKTG103 10	5	B+	1	1	5	1	5	1		
AS	19952	MTH 101 45	5	C+	1	1	5	1	5	1		
AS	19974	MTH 105 88	5	D	1	1	5	1	5	1		
AS	19964	HU 101 87	5	C+	1	1	5	1	5	1		
AS	19974	HU 101 79	5	B-	1	1	5	1	5	1		
AAS	19962	MTH 101 65	5	A	1	1	5	1	5	1		
AS	19954	FA 110 15	3	A-	1	1	3	1	3	1		
AS	19934	MTH 105 39	5	B	1	1	5	1	5	1		
AS	19982	ART 114 57	4	A	1	1	4	1	4	1		
AS	19942	MKTG103 16	5	B	1	1	5	1			5	1
			4.361				362	83	280	63	82	20

AS	19972	ENG 250 61	5	B+	2	2	9	2	9	2		
AS	19964	ENG 101 67	4	B	2							
AS	19931	ENG 101 55	4	B	2	2	9	2	9	2		
AS	19932	ENG 250 06	5	B+	2							
AS	19972	CIS 155 57	3	A-	2	2	7	2	7	2		
AS	19964	CIS 102 88	4	A-	2							
AS	19962	GD 130 20	4	A	2	2	8	2	8	2		
AS	19954	GD 129 10	4	B	2							
AS	19972	ENG 101 68	4	A	2		8	2	8	2		
AS	19964	BUS 101 98	4	B+	2	2						
AS	19962	CIS 102 55	4	A	2		7	2	7	2		
AS	19982	CIS 155 58	3	A	2	2						
AS	19962	FIN 105 21	5	B-	2	2	10	2	5	1	5	1
AS	19954	MKTG103 09	5	A-	2							
AA	19964	HU 101 85	5	A-	2	2	9	2	9	2		
AA	19972	ENG 101 66	4	B-	2							
AS	19953	MKTG103 12	5	A	2		10	2	5	1	5	1
AS	19953	BUS 105 12	5	A-	2	2						
AS	19961	MKTG103 15	5	B-	2	2	8	2	5	1	3	1
AS	19962	MA 110 20	3	A	2							
AS	19934	MTH 101 39	5	C	2		10	2	10	2		

AS	19942	MTH 105 30	5	C	2	2					
AS	19992	BIT 1080058	2	A	2		7	2	5	1	2	1
AS	19982	ART 105 51	5	A	2	2					
AS	19982	ART 107 50	4	A	2	2	9	2	9	2		
AS	19974	ART 105 51	5	A	2							
AS	19974	MTH 105 75	5	A	2	2	10	2	10	2		
AS	19982	MTH 106 89	5	A	2							
AS	19972	MTH 105 61	5	B	2	2	10	2	10	2		
AS	19964	MTH 106 82	5	B+	2							
AS	19972	BUS 101 68	4	A	2	2	8	2	8	2		
AS	19964	ENG 101 98	4	A	2							
AS	19962	ENG 101 77	4	A	2	2	9	2	9	2		
AS	19954	HU 101 43	5	A	2							
AS	19964	HU 101 86	5	B+	2		9	2	9	2		
AS	19972	ENG 101 67	4	B+	2	2						
AS	19954	MTH 105 66	5	A	2		10	2	10	2		
AS	19962	MTH 106 62	5	A	2	2						
AS	19942	ENG 250 06	5	A-	2		9	2	9	2		
AS	19934	ENG 101 66	4	B+	2	2						
AS	19922	AT 105 07	5	A-	2		10	2	10	2		
AAS	19922	AT 105 07	5	A-	2	2						
AAS	19942	FA 110 05	3	B+	2		6	2	6	2		
AS	19942	FA 110 05	3	B+	2	2						
AA	19944	MTH 105 76	5	B+	2	2	10	2	10	2		
AA	19952	MTH 106 15	5	A	2							
AS	19964	GD 172 50	3	A	2		7	2			7	2
AS	19972	GD 114 63	4	A	2	2						
AS	19964	MTH 106 85	5	B	2	2	10	2	10	2		
AS	19954	MTH 101 65	5	C+	2							
AS	19962	MTH 106 24	5	D+	2	2	10	2	10	2		
AS	19954	MTH 105 75	5	D+	2							
AS	19954	CD 140 10	3	A	2		8	2	5	1	3	1
AS	19954	HU 101 41	5	A-	2	2						
AS	19962	CD 140 61	3	A-	2	2	8	2	5	1	3	1
AS	19964	HU 101 93	5	A-	2							
AAS	19954	MA 110 10	3	A	2	2	6	2	6	2		
AS	19954	MA 110 10	3	A	2							
AAS	19921	ELET110 08	6	A	2		18	2	18	2		
AAS	19912	ELET103 69	12	A	2	2						
AS	19942	MKTG103 16	5	B+	2		9	2	4	1	5	1
AS	19934	MGT 101 32	4	B	2	2						
AS	19964	ENG 101 88	4	A-	2	2	9	2	9	2		
AS	19972	HU 101 65	5	B	2							
AS	19964	HU 101 83	5	B	2		9	2	9	2		
AS	19972	ENG 101 62	4	B-	2	2						
AS	19954	HU 101 35	5	B-	2		8	2	8	2		
AS	19962	FA 110 20	3	B-	2	2						
AS	19934	AVN 110 08	5	C	2		9	2	9	2		
AS	19942	AVN 105 10	4	A	2	2						
CR	19972	MUS 150 50	5	A	2		10	2	10	2		
AS	19972	MUS 150 50	5	A	2	2						
DI	19942	CD 113 05	5	A-	2		8	2	8	2		
DI	19942	CD 140 05	3	B	2	2						
AA	19944	MTH 105 75	5	B-	2		10	2	10	2		

AA	19952	HU 101 28	5	A-	2	2						
AS	19922	MTH 106 16	5	C+	2		10	2	10	2		
AS	19921	MTH 105 24	5	B-	2	2						
AS	19972	ENG 101 69	4	A	2		8	2	8	2		
AS	19964	BUS 101 98	4	A	2	2						
AS	19962	MKTG109 19	5	A-	2		10	2	10	2		
AS	19954	MKTG103 11	5	B+	2	2						
AS	19934	SPN 101 39	5	A-	2	2	10	2	10	2		
AS	19932	MTH 106 30	5	A	2							
AS	19972	MA 110 63	3	A	2		8	2	5	1	3	1
AS	19964	PSY 101 80	5	B	2	2						
AS	19934	HU 101 31	5	A	2	2	9	2	9	2		
AS	19942	ENG 101 56	4	A-	2							
CR	19972	ENG 101 67	4	B	2		9	2	9	2		
CR	19964	HU 101 86	5	B+	2	2						
CR	19954	MTH 106 20	5	A	2	2	10	2	10	2		
CR	19962	MTH 105 65	5	B+	2							
AS	19972	PHY 127 50	5	A	2		10	2	10	2		
AS	19971	MTH 105 87	5	A-	2	2						
AS	19981	AT 110 50	4	A-	2	2	9	2	9	2		
AS	19964	MTH 105 88	5	C	2							
AS	19972	ENG 101 67	4	C	2	2	9	2	9	2		
AS	19964	HU 101 86	5	B-	2							
AS	19972	MTH 106 77	5	A-	2	2	10	2	10	2		
AS	19964	MTH 105 75	5	B+	2							
AAS	19954	MTH 105 68	5	B	2	2	10	2	10	2		
AAS	19962	MTH 106 21	5	B	2							
AAS	19964	MTH 105 89	5	C+	2		10	2	10	2		
AAS	19972	MTH 106 69	5	B	2	2						
AS	19954	CIS 102 43	4	A	2	2	7	2	4	1	3	1
AS	19982	CIS 155 58	3	A	2							
AAS	19954	MA 110 10	3	A	2	2	6	2	6	2		
AS	19954	MA 110 10	3	A	2							
AS	19972	AT 110 66	4	A	2		9	2	9	2		
AS	19972	PHY 127 50	5	A	2	2						
AS	19942	MTH 106 23	5	B+	2		10	2	10	2		
AS	19934	MTH 105 37	5	B+	2	2						
AS	19972	MTH 106 50	5	B+	2	2	10	2	10	2		
AS	19964	MTH 105 82	5	B+	2							
AS	19932	MKTG103 14	5	A-	2	2	9	2	9	2		
AS	19931	MGT 101 21	4	A	2							
AS	19964	MTH 105 75	5	B-	2		10	2	10	2		
AS	19972	MTH 106 77	5	C	2	2						
AS	19953	MKTG103 12	5	A-	2	2	10	2	5	1	5	1
AS	19953	BUS 105 12	5	A-	2							
AS	19974	ART 105 78	5	A	2		10	2	10	2		
AS	19972	HU 101 51	5	A-	2	2						
AS	19982	MTH 106 67	5	C	2	2	10	2	10	2		
AS	19974	MTH 105 90	5	B+	2							
AS	19974	MTH 105 92	5	A-	2		10	2	10	2		
AS	19982	MTH 106 56	5	C	2	2						
AS	19954	FA 110 15	3	A-	2		8	2	8	2		
AS	19944	MA 110 10	5	A-	2	2						
AS	19952	MTH 106 15	5	C-	2	2	10	2	10	2		

AS	19944	MTH 105 76	5	C	2						
AS	19954	MKTG103 10	5	B	2		10	2	5	1	5	1
AS	19964	HU 101 89	5	C	2	2						
AS	19964	MTH 105 85	5	D+	2	2	8	2	5	1	6	1
AS	19974	MA 110 51	3	A	2							
AS	19931	MTH 105 26	5	A-	2		10	2	10	2		
AS	19932	MTH 106 16	5	B-	2	2						
APE	19931	MTH 105 26	5	B+	2		10	2	10	2		
APE	19934	HU 101 30	5	C	2	2						
AS	19972	MTH 106 65	5	B-	2		10	2	10	2		
AS	19964	MTH 105 79	5	B+	2	2						
AS	19964	MTH 106 82	5	A	2	2	10	2	10	2		
AS	19972	MTH 105 61	5	A	2							
AS	19982	MTH 106 59	5	A-	2	2	10	2	10	2		
AS	19974	MTH 105 55	5	B	2							
AA	19962	MKTG103 21	5	A-	2	2	8	2	8	2		
AA	19971	CST 101 81	3	A-	2							
APE	19964	MTH 106 84	5	A	2		10	2	10	2		
APE	19972	MTH 105 62	5	A	2	2						
			9.162									

AS	19954	MTH 106 20	5	A	3	3	15	3	15	3		
AS	19944	MTH 101 68	5	A	3							
AS	19952	MTH 105 58	5	A-	3							
AS	19961	SPN 102 20	5	A	3	3	15	3	15	3		
AS	19962	SPN 103 20	5	A-	3							
AS	19954	SPN 101 16	5	A	3							
AS	19974	PSY 101 77	5	A	3		15	3	15	3		
AS	19972	MTH 105 62	5	A	3	3						
AS	19964	MTH 106 83	5	A	3							
AS	19932	MTH 105 30	5	C	3	3	15	3	15	3		
AS	19944	FRN 101 68	5	B-	3							
AS	19942	MTH 106 22	5	C+	3							
AS	19964	MKTG103 86	5	A	3		13	3	3	1	10	2
AS	19972	CST 101 57	3	A	3	3						
AS	19971	MKTG109 52	5	A	3							
AS	19944	GD 259 07	2	A	3		9	3	3	1	6	2
AS	19934	GD 129 07	4	A	3							
AS	19942	CIS 140 14	3	B	3	3						
AS	19972	GD 114 62	4	A	3	3	11	3			11	3
AS	19954	GD 259 07	2	A	3							
AS	19971	ASL 101 82	5	A	3							
AS	19964	MTH 106 83	5	B-	3	3	13	3	10	2	3	1
AS	19972	MTH 105 62	5	B-	3							
AS	19972	MA 110 63	3	A	3							
AA	19942	GER 103 21	5	C-	3		15	3	15	3		
AA	19934	GER 101 07	5	C+	3							
AA	19941	GER 102 10	5	C+	3	3						
AAS	19944	MTH 106 68	5	B+	3	3	15	3	15	3		
AAS	19942	MTH 101 34	5	A	3							
AAS	19942	MTH 105 34	5	A	3							
AS	19964	MTH 106 86	5	C+	3		15	3	15	3		
AS	19972	MTH 105 63	5	B	3	3						

AS	19962	PSY 101 80	5	B+	3						
AS	19972	MTH 105 66	5	A-	3		15	3	15	3	
AS	19974	MTH 106 78	5	A	3						
AS	19964	MTH 101 83	5	B+	3	3					
AS	19982	ENG 101 78	4	A	3		13	3	13	3	
AS	19974	HU 101 53	5	A-	3						
AS	19982	CIS 102 59	4	A	3	3					
AS	19972	ENG 101 67	4	A	3		13	3	13	3	
AS	19964	HU 101 86	5	A	3						
AS	19964	CIS 102 91	4	A-	3	3					
AS	19982	BUS 105 54	5	B+	3		15	3	15	3	
AS	19982	MTH 106 76	5	B+	3						
AS	19974	MTH 105 81	5	A	3	3					
AAS	19932	SPN 103 17	5	D	3		15	3	15	3	
AAS	19924	SPN 101 11	5	B-	3						
AAS	19931	SPN 102 07	5	D	3	3					
CR	19964	MTH 105 90	5	B	3	3	15	3	15	3	
CR	19972	MTH 106 56	5	B-	3						
CR	19964	HU 101 92	5	B+	3						
AS	19944	ENG 101 7[illegible]	4	B	3		13	3	13	3	
AS	19952	HU 101 27	5	B	3						
AS	19952	ENG 130 10	4	B-	3	3					
AA	19954	SPN 101 14	5	A-	3		15	3	15	3	
AA	19962	SPN 103 22	5	B	3						
AA	19961	SPN 102 18	5	A	3	3					
AS	19922	GER 103 04	5	C	3		15	3	15	3	
AS	19914	GER 101 11	5	C+	3	3					
AS	19921	GER 102 04	5	C	3						
AS	19972	MTH 105 62	5	C	3		15	3	15	3	
AS	19964	PSY 101 80	5	C	3						
AS	19964	MTH 106 83	5	B	3	3					
AS	19952	MTH 106 45	5	B-	3		15	3	15	3	
AS	19944	MTH 105 67	5	A-	3	3					
AS	19944	HU 101 31	5	A-	3						
AS	19961	SPN 102 21	5	A	3	3	15	3	15	3	
AS	19954	SPN 101 17	5	A	3						
AS	19962	SPN 103 82	5	B-	3						
AS	19962	PHY 127 76	5	B	3	3	14	3	14	3	
AS	19954	HU 101 43	5	B-	3						
AS	19962	ENG 101 77	4	A	3						
AS	19962	HU 110 25	3	B-	3	3	12	3	12	3	
AS	19954	HU 101 36	5	B-	3						
AS	19972	BUS 101 69	4	A	3						
CR	19931	ENG 101 55	4	C+	3	3	12	3	12	3	
CR	19931	COM 110 55	3	B+	3						
CR	19932	ENG 250 06	5	D+	3						
AS	19964	MKTG103 89	5	B	3	3	15	3	5	1	10	2
AS	19972	MTH 101 65	5	B	3						
AS	19972	MKTG109 51	5	B-	3						
AS	19972	HU 101 65	5	A	3		14	3	14	3	
AS	19954	MTH 105 68	5	B	3	3					
AS	19964	ENG 101 88	4	A	3						
AS	19962	COM 142 83	5	B-	3		15	3	5	1	10	2
AS	19961	COM 141 15	5	C+	3						

AS	19954	COM 140 17	5	A	3	3						
AS	19974	MTH 105 97	5	B	3		13	3	10	2	3	1
AS	19982	MTH 106 52	5	B	3	3						
AS	19982	MA 110 51	3	A	3							
AS	19971	MTH 105 86	5	C	3		15	3	15	3		
AS	19972	MTH 106 59	5	C-	3							
AS	19964	MTH 101 86	5	C+	3	3						
AS	19961	COM 141 10	5	A-	3		15	3	15	3		
AS	19954	COM 140 18	5	A-	3							
AS	19962	COM 142 81	5	A	3	3						
AS	19924	MTH 105 26	5	A	3		15	3	10	2	5	1
AS	19952	MA 110 16	5	A-	3	3						
AS	19932	MTH 106 15	5	B+	3							
			14.09				465	99	407	85	58	14
AS	19962	MTH 106 24	5	C+	4		20	4	20	4		
AAS	19962	MTH 106 24	5	C+	4	4						
AS	19954	MTH 105 75	5	B+	4							
AAS	19954	MTH 105 75	5	B+	4							
AS	19962	BUS 105 36	5	A-	4	4	20	4	10	2	10	2
AS	19954	FIN 105 23	5	A	4							
AS	19961	MKTG109 11	5	A-	4							
AS	19954	MKTG103 14	5	B+	4							
AS	19982	ECD 121 50	5	A	4		20	4	20	4		
AS	19974	ECD 110 55	5	A	4	4						
AS	19974	MTH 105 55	5	B	4							
AS	19982	MTH 106 59	5	B	4							
AS	19961	ENG 101 78	4	B+	4		19	4	14	3	5	1
AS	19942	CIS 112 08	5	A	4							
AS	19942	CIS 105 08	5	A	4							
AS	19962	ENG 250 64	5	B+	4	4						
AS	19932	GER 103 17	5	C	4		18	4	15	3	3	1
AS	19942	GD 137 21	3	A	4							
AS	19924	GER 101 05	5	B-	4							
AS	19931	GER 102 07	5	B-	4	4						
AS	19964	PRT 104 66	3	A	4		12	4			12	4
AS	19972	GD 228 60	2	A	4							
AS	19971	PRT 142 82	5	A-	4	4						
AS	19964	GD 259 51	2	A	4							
AS	19962	CIS 155 06	3	B+	4	4	17	4	14	3	3	1
AS	19954	MTH 105 76	5	C	4							
AS	19962	MTH 106 25	5	C	4							
AS	19954	CIS 102 45	4	A	4							
CR	19972	ENG 250 61	5	A	4		14	4	12	3	2	1
CR	19964	MA 110 67	3	A	4							
CR	19964	ENG 101 67	4	A	4							
CR	19964	GD 259 50	2	A	4	4						
AS	19982	ENG 101 85	4	A	4		16	4	13	3	3	1
AS	19972	CIS 155 55	3	A	4							
AS	19964	CIS 102 86	4	A	4	4						
AS	19974	HU 101 55	5	A	4							
AS	19972	CIS 155 56	3	A	4		16	4	16	4		
AS	19964	CIS 102 87	4	A	4							

AS	19964	HU 101 85	5	A	4							
AS	19972	ENG 101 66	4	A	4	4						
AS	19971	MTH 105 86	5	A-	4		19	4	19	4		
AS	19964	MTH 101 86	5	A	4	4						
AS	19964	CIS 102 86	4	A	4							
AS	19972	MTH 106 59	5	A-	4							
CR	19984	EDDT1010058	5	A	4		17	4	17	4		
CR	19982	MTH 106 63	5	A	4	4						
CR	19974	MTH 105 58	5	A	4							
CR	19992	EDDT1040054	2	A	4							
AS	19944	ENG 101 76	4	A	4		18	4	18	4		
AS	19932	MTH 106 31	5	A	4							
AS	19931	MTH 105 25	5	A	4	4						
AS	19952	ENG 130 10	4	A	4							
AS	19982	HU 101 82	5	A	4		18	4	18	4		
AS	19974	MTH 105 61	5	B+	4							
AS	19974	ENG 101 74	4	A	4	4						
AS	19974	ART 107 60	4	A-	4							
AS	19962	PRT 142 84	5	C	4	4	14	4			14	4
AS	19954	GD 137 07	3	A	4							
AS	19962	PRT 115 84	4	A	4							
AS	19962	GD 228 84	2	B	4							
AAS	19944	MA 110 10	5	A	4		14	4	10	2	4	2
AS	19944	GD 259 07	2	A	4							
AAS	19944	GD 259 07	2	A	4	4						
AS	19944	MA 110 10	5	A	4							
AS	19932	MTH 106 17	5	A	4		20	4	20	4		
AS	19924	MTH 105 28	5	A-	4							
AS	19932	MTH 106 17	5	A	4							
AS	19924	MTH 105 28	5	A-	4	4						
AS	19922	ELET130 05	6	A-	4	4	23	4	5	1	18	3
AS	19932	ELET101 05	6	A-	4							
AS	19932	ELET102 05	6	B+	4							
AS	19932	MTH 106 16	5	C+	4							
AS	19921	HU 101 20	5	B-	4		17	4	9	2	8	2
AS	19914	CD 113 08	5	A	4	4						
AS	19922	ENG 101 50	4	B	4							
AS	19922	CD 140 10	3	A-	4							
AS	19974	HU 101 76	5	A	4	4	15	4	9	2	6	2
AS	19972	GD 116 61	3	A	4							
AS	19982	ART 172 76	3	A	4							
AS	19982	ENG 101 76	4	A	4							
			17.35				347	80	259	56	88	24

AS	19974	CIS 102 50	4	B	5	5	24	5	24	5		
AS	19982	MTH 106 80	5	B	5							
AS	19981	MTH 105 55	5	B+	5							
AS	19974	MTH 101 82	5	A-	5							
AS	19974	HU 101 55	5	A-	5							
AS	19972	GD 105 50	5	A	5		22	5	9	2	13	3
AS	19982	GEOG160 80	5	A-	5	5						
AS	19964	CIS 102 89	4	B+	5							
AS	19974	CIS 155 52	3	B	5							

AS	19974	MKTG103 50	5	A	5							
AS	19961	ITP 131 05	3	A-	5		23	5	20	4	3	1
AS	19944	COM 140 17	5	B	5							
AS	19954	COM 143 07	5	B-	5							
AS	19951	COM 141 64	5	A-	5							
AS	19952	COM 142 17	5	A	5	5						
AS	19974	AT 110 50	4	A-	5		19	5	10	3	9	2
AS	19974	ART 114 50	4	A	5	5						
AS	19984	HUMA1100084	3	A-	5							
AS	19984	EDDT1010054	5	A	5							
AS	19992	ENGL1010128	3	A	5							
AS	19942	FRN 103 08	5	C	5		25	5	25	5		
AS	19942	MTH 106 22	5	D-	5	5						
AS	19934	FRN 101 39	5	B	5							
AS	19934	MTH 105 39	5	C-	5							
AS	19941	FRN 102 10	5	C-	5							
CR	19972	MUS 145 50	1	A	5		12	5	7	4	5	1
CR	19964	MUS 145 10	1	A	5	5						
CR	19971	MUS 145 10	1	A	5							
CR	19982	ENG 101 65	4	A	5							
CR	19982	PRT 142 64	5	A	5							
AS	19974	MTH 101 82	5	A	5		24	5	24	5		
AS	19981	MTH 105 55	5	A	5							
AS	19982	MTH 106 80	5	A	5							
AS	19982	ENG 101 84	4	A	5							
AS	19974	HU 101 54	5	A	5	5						
AS	19944	COM 140 17	5	B+	5		23	5	20	4	3	1
AS	19961	ITP 131 05	3	A	5	5						
AS	19954	COM 143 07	5	A	5							
AS	19952	COM 142 17	5	A-	5							
AS	19951	COM 141 64	5	B+	5							
AAS	19932	FIN 120 18	4	A-	5		18	5	18	5		
AAS	19922	ACCT102 14	4	C+	5	5						
AAS	19914	FIN 121 09	3	C	5							
AAS	19914	ACCT101 26	4	C+	5							
AAS	19924	CIS 140 17	3	A	5							
			21.11				190	45	157	37	33	8

CR	19971	MUS 145 10	1	A	6		6	6			6	6
CR	19972	MUS 145 50	1	A	6							
CR	19964	MUS 145 10	1	A	6							
CR	19961	MUS 145 05	1	A	6							
CR	19962	MUS 145 10	1	A	6	6						
CR	19954	MUS 145 41	1	A	6							
AAS	19962	CIS 102 51	4	A	6		23	6	23	6		
AAS	19972	FIN 105 51	5	B-	6							
AAS	19964	CIS 155 50	3	A	6							
AAS	19954	ACCT101 32	4	B	6	6						
AAS	19954	FIN 121 07	3	C	6							
AAS	19962	ACCT102 51	4	C	6							
AS	19952	MA 110 17	5	A	6	6	26	6	26	6		
AAS	19952	MA 110 17	5	A	6							
AAS	19954	COM 140 17	5	B+	6							

AS	19954	COM 140 17	5	B+	6							
AS	19954	GD 172 17	3	A	6							
AAS	19954	GD 172 17	3	A	6							
AAS	19944	BIOL101 50	5	B	6		30	6	30	6		
AAS	19951	COM 141 64	5	A	6							
AAS	19951	PSY 101 50	5	A	6							
AAS	19944	COM 140 17	5	B-	6	6						
AAS	19952	PSY 150 50	5	A	6							
AAS	19952	COM 142 17	5	A	6							
AS	19972	OIS 118 50	5	A	6		24	6	24	6		
AS	19972	OIS 108 50	3	A	6	6						
AS	19972	COM 110 63	3	A	6							
AS	19972	CIS 102 50	4	A	6							
AS	19972	ENG 101 63	4	A	6							
AS	19962	BUS 105 34	5	B	6							
AS	19982	CST 101 55	3	A	6	6	26	6	21	5	5	1
AS	19984	ENGL1010144	3	B+	6							
AS	19974	MKTG109 87	5	A	6							
AS	19982	MTH 106 54	5	A	6							
AS	19974	MTH 105 92	5	B+	6							
AS	19981	MKTG103 50	5	A	6							
AS	19944	FIN 121 18	3	C+	6		22	6	12	3	10	3
AS	19962	FIN 120 50	4	C+	6							
AS	19954	CIS 155 10	3	B	6							
AS	19952	CIS 102 24	4	A	6							
AS	19944	ACCT101 18	4	B	6	6						
AS	19952	ACCT102 24	4	C	6							
AS	19952	CIS 102 24	4	A	6		22	6	12	3	10	3
AS	19944	FIN 121 18	3	B	6							
AS	19962	FIN 120 50	4	B-	6							
AS	19944	ACCT101 18	4	B	6	6						
AS	19954	CIS 155 10	3	A-	6							
AS	19952	ACCT102 24	4	C	6							
AS	19954	CIS 102 42	4	A	6		26	6	18	4	8	2
AS	19972	ENG 101 67	4	A	6							
AS	19972	CIS 155 57	3	A	6	6						
AS	19964	GEOG160 87	5	A	6							
AS	19964	HU 101 86	5	A	6							
AS	19964	MKTG103 87	5	A	6							
AS	19924	MTH 101 30	5	B	6		26	6	18	4	8	2
AS	19922	CD 140 10	3	C+	6							
AS	19922	CIS 140 14	3	B+	6							
AS	19932	MTH 105 51	5	C	6	6						
AS	19914	CD 113 08	5	A	6							
AS	19921	HU 101 20	5	D	6							
			23.1				231	60	184	43	47	17

AS	19992	MATH1060090	3	A-	7		27	7	24	6	3	1
AS	19974	SPN 101 50	5	A	7							
AS	19982	OIS 108 80	3	B+	7							
AS	19984	COM 1010088	2	A-	7							
AS	19981	SPN 102 55	5	B+	7	7						
AS	19984	MATH1050113	4	B+	7							

AS	19982	SPN 103 77	5	A-	7						
AS	19964	FIN 121 50	3	C+	7		26	7	26	7	
AS	19982	FIN 105 52	5	A	7						
AS	19974	CIS 155 51	3	A	7						
AS	19964	ACCT101 50	4	B+	7						
AS	19972	ACCT102 51	4	B-	7						
AS	19972	CIS 102 52	4	A-	7						
AS	19974	OIS 107 52	3	A	7	7					
AS	19982	ART 171 54	3	A	7		23	7	3	1	20	6
AS	19982	OIS 108 50	3	A	7						
AS	19974	ART 172 54	3	A	7						
AS	19984	JRN 1010059	2	A	7						
AS	19982	PRT 142 50	5	A	7						
AS	19982	PRT 104 50	3	A	7						
AS	19982	ART 114 50	4	A	7	7					
AS	19974	OIS 108 54	3	A	7		25	7	19	5	6	2
AS	19972	GD 132 50	2	A	7						
AS	19964	GD 107 15	4	A	7						
AS	19972	GD 105 50	5	A	7						
AS	19982	PRT 104 50	3	A	7						
AS	19982	ART 171 53	3	A	7						
AS	19982	PRT 142 50	5	A	7	7					
AS	19962	FIN 120 51	4	A-	7		27	7	13	3	14	4
AS	19944	ACCT101 19	4	B+	7						
AS	19961	GER 102 05	5	D+	7	7					
AS	19952	ACCT102 25	4	B	7						
AS	19952	CIS 102 25	4	A	7						
AS	19954	CIS 155 11	3	A-	7						
AS	19944	FIN 121 17	3	C	7						
CR	19944	COM 143 10	5	B	7		29	7	24	6	5	1
CR	19941	MTH 105 52	5	B+	7						
CR	19952	CHEF112 17	5	B	7						
CR	19944	MA 110 10	5	A	7						
CR	19942	COM 142 21	3	A	7						
CR	19941	COM 141 10	3	A	7	7					
CR	19934	COM 140 17	3	A	7						
AS	19954	GD 130 06	4	A-	7		29	7	19	4	10	3
AS	19954	GD 129 06	4	B-	7	7					
AS	19944	GD 259 07	2	A	7						
AS	19951	SPN 102 64	5	B	7						
AS	19952	SPN 103 17	5	B+	7						
AS	19962	CIS 102 81	4	B	7						
AS	19944	SPN 101 10	5	B+	7						
AAS	19962	OIS 104 60	2	A-	7		26	7	14	3	12	4
AAS	19944	CD 113 30	5	A	7						
AAS	19962	OIS 160 60	2	A	7						
AAS	19952	CD 140 05	3	A	7	7					
AAS	19962	MTH 105 60	5	B	7						
AAS	19954	CIS 102 41	4	A	7						
AAS	19954	MTH 101 66	5	B	7						
AS	19962	CIS 102 81	4	A	7	7	30	7	22	5	8	2
AS	19964	PRT 104 67	3	A	7						
AS	19954	COM 140 19	5	B+	7						
AS	19962	COM 142 84	5	A	7						

AS	19962	GD 129 82	4	A	7							
AS	19962	GD 130 82	4	A-	7							
AS	19961	COM 141 11	5	A	7							
AS	19962	COM 142 81	5	A-	7		29	7	15	3	14	4
AS	19954	COM 140 18	5	B-	7							
AS	19961	COM 141 10	5	B+	7							
AS	19972	GD 116 63	3	A	7							
AS	19972	GD 172 61	3	A	7							
AS	19962	GD 129 83	4	A-	7							
AS	19962	GD 130 83	4	A-	7	7						
AS	19984	COM 1010089	2	A-	7		21	7	21	7		
AS	19992	COM 1200055	3	A-	7							
AS	19992	HIS 1700090	3	A	7							
AS	19992	ENGL1010137	3	A	7							
AS	19992	MATH1060090	3	B	7							
AS	19984	HUMA1100089	3	A-	7	7						
AS	19984	MATH1050113	4	C	7							
			26.55				292	77	200	50	92	27
AS	19992	MATH1060075	3	D	8	8	25	8	13	4	12	4
AS	19992	ART 1540053	3	B	8							
AS	19984	ENGL1010141	3	A	8							
AS	19984	MATH1050100	4	B	8							
AS	19992	ART 1020059	3	B-	8							
AS	19984	HUMA1100084	3	B-	8							
AS	19992	ART 1650059	3	C	8							
AS	19984	ART 1600054	3	A	8							
AS	19942	ACCT102 14	4	C+	8		28	8	28	8		
AS	19934	ACCT101 17	4	B-	8							
AAS	19934	ACCT101 17	4	B-	8							
AAS	19942	ACCT102 14	4	C+	8							
AS	19934	FIN 121 17	3	A-	8							
AAS	19934	FIN 121 17	3	A-	8							
AS	19942	CIS 140 14	3	A	8	8						
AAS	19942	CIS 140 14	3	A	8							
AA	19971	FIN 121 80	3	A-	8		33	8	33	8		
AA	19961	CIS 155 05	3	A	8							
AA	19964	MTH 105 93	5	C+	8							
AA	19972	MTH 106 70	5	B	8							
AA	19962	CIS 102 64	4	A-	8							
AA	19972	FIN 105 70	5	B	8							
AA	19954	ACCT101 30	4	B	8							
AA	19961	ACCT102 30	4	B+	8	8						
AS	19974	ART 114 68	4	A-	8		39	8	30	6	9	2
AS	19971	SPN 102 83	5	A	8							
AS	19964	ASL 101 52	5	A-	8							
AS	19964	SPN 101 51	5	A	8							
AS	19972	SPN 103 51	5	A	8							
AS	19972	MTH 106 62	5	A	8							
AS	19971	MTH 105 82	5	A	8							
AS	19964	MTH 101 67	5	A	8	8						
AS	19974	MTH 101 82	5	B-	8		35	8	32	7	3	1
AS	19964	MA 110 66	3	B	8	8						

AS	19974	HU 101 55	5	B	8							
AS	19982	COM 120 77	4	A	8							
AS	19964	CIS 102 87	4	A-	8							
AS	19982	HIS 170 77	5	C+	8							
AS	19981	MTH 105 55	5	B-	8							
AS	19982	ENG 101 84	4	B	8							
AS	19932	GD 123 17	3	A	8		36	8	30	6	6	2
AS	19934	SPN 101 12	5	B+	8	8						
AS	19942	SPN 103 20	5	A	8							
AS	19932	GD 116 17	3	A	8							
AS	19924	GER 101 05	5	A	8							
AS	19932	GER 103 17	5	A	8							
AS	19941	SPN 102 10	5	A	8							
AS	19931	GER 102 07	5	A	8							
			32.67				196	48	166	39	30	9
AS	20002	HUMA1100161	3	A	9		23	9	9	3	14	6
AS	19994	ART 1600055	3	A-	9							
AS	19994	ECON1010050	3	A-	9							
AS	19984	ACCT1110063	3	B	9							
AS	20002	FIN 1050154	3	B+	9							
AS	19984	FIN 1210053	2	A-	9							
AS	19992	CIS 1020065	3	B+	9							
AS	19992	ACCT1120051	3	A-	9	9						
AS	19994	CIS 1550052	2	A-	9							
AS	19971	MTH 105 87	5	C+	9		38	9	38	9		
AS	19964	MTH 101 87	5	B+	9							
AS	19972	SPN 103 58	5	B	9							
AS	19982	HIS 170 77	5	A-	9							
AS	19974	CIS 102 50	4	A-	9	9						
AS	19964	SPN 101 86	5	A-	9							
AS	19982	ENG 101 77	4	A	9							
AS	19974	HU 101 52	5	A-	9							
AS	19971	SPN 102 86	5	B	9							
AS	19992	SPN 1020054	5	A	9		35	9	35	9		
AS	19984	SPN 1010086	5	A	9							
AS	19974	MTH 101 80	5	A	9							
AS	19981	MTH 105 56	5	A	9							
AS	19982	CIS 102 59	4	A	9	9						
AS	19992	ENGL1010135	3	A	9							
AS	19992	HIS 1700090	3	A	9							
AS	19982	MTH 106 82	5	A	9							
AS	19984	HUMA1100087	3	A	9							
			35.33				96	27	82	21	14	6
AS	19971	MTH 105 87	5	B+	10		42	10	42	10		
AS	19972	CIS 102 52	4	B	10	10						
AS	19964	MTH 101 87	5	B	10							
AS	19972	MTH 106 58	5	B	10							
AS	19982	FIN 105 52	5	A	10							
AS	19964	FIN 121 50	3	B+	10							
AS	19982	CIS 102 59	4	A	10							

AS	19972	ACCT102 51	4	A-	10					
AS	19974	CIS 155 51	3	A	10					
AS	19964	ACCT101 50	4	A-	10					
			42							
AAS	19974	CIS 155 51	3	A	11		47	11	47	11
AAS	19972	ACCT102 51	4	B	11					
AAS	19974	MTH 101 80	5	A-	11					
AAS	19982	MTH 106 82	5	C+	11					
AAS	19982	FIN 105 52	5	B+	11					
AAS	19964	ACCT101 50	4	A-	11					
AAS	19982	ENG 101 85	4	A-	11					
AAS	19981	MTH 105 56	5	B+	11					
AAS	19964	FIN 121 50	3	B	11	11				
AAS	19972	CIS 102 52	4	A	11					
AAS	19974	HU 101 55	5	A-	11					
			47							
					688	688				

APPENDIX D

Salt Lake Community College enrollment growth
1988-1989 through 2002-2003

Academic Year	Annualized FTE Students	Annualized headcount
1989-1990[1]	7,584	18,843
1990-1991 [1]	8,596	22,256
1991-1992 [1]	10,243	24,794
1992-1993 [1]	10,775	25,018
1993-1994 [1]	11,449	26,365
1994-1995 [1]	11,846	27,956
1995-1996 [1]	12,431	30,643
1996-1997 [1]	13,002	32,652
1997-1998 [1]	13,216	31,816
1998-1999 [2] [3] Estimated	12,385	29,811
1999-2000 [2] Projected	13,252	31,898
2000-2001 [2] Projected	14,180	34,125
2001-2002 [2] Projected	15,172	36,519
2002-2003 [2] Projected	16,234	39,076

Source:
[1] Salt Lake Community College fact book, 1998-1999.
[2] Salt Lake Community College research specialist, March 1999.
[3] Salt Lake Community College converted from quarters to semesters.

Growth of Salt Lake Community College's
Concurrent Enrollment Program

Academic Year	Student Enrollment	Number of class sections	Average number of students per section	Percent Growth in enrollments
1989-1990	758	110	7	-
1990-1991	1,283	108	12	69.26%
1991-1992	2,135	259	8	66.41%
1992-1993	2,299	223	10	7.68%
1993-1994	2,822	242	12	22.75%
1994-1995	2,953	158	19	4.64%
1995-1996	5,639	282	20	90.96%
1996-1997	8,215	440	19	45.68%
1997-1998	9,493	538	18	15.56%
1998-1999 Estimated	11,600	680	17	22.20% (1)
1999-2000 Projected	12,760	748	17	10.00% (2)
2000-2001 Projected	13,653	823	17	7.00% (2)
2001-2002 Projected	14,609	905	16	7.00% (2)
2002-2003 Projected	15,632	996	16	7.00% (2)

Source: Salt Lake Community College Concurrent Enrollment program director, March 1999.
(1) Estimated enrollment, final enrollment calculation not completed as of April 1999.
(2) Concurrent enrollment program director estimates growth will level off with growth rates of 10% for 1999-2000 and 7% for 2000-2001 through 2002-2003.

APPENDIX E

Enrolled Copy **H.B. 228**

ACCELERATED LEARNING AMENDMENTS

1996 GENERAL SESSION

STATE OF UTAH

Sponsor: J. Brent Haymond

AN ACT RELATING TO PUBLIC EDUCATION; ALLOWING AN ADMISSIONS APPLICATION FEE TO BE CHARGED TO PARTICIPANTS IN CONCURRENT ENROLLMENT PROGRAMS; INDEXING THE COST OF THE PROGRAM TO THE VALUE OF THE WEIGHTED PUPIL UNIT; AND PROVIDING AN EFFECTIVE DATE.

This act affects sections of Utah Code Annotated 1953 as follows:

AMENDS:

53A-15-101, as last amended by Chapter 249, Laws of Utah 1994

53A-17a-120, as last amended by Chapter 270, Laws of Utah 1995

Be it enacted by the Legislature of the state of Utah:

Section 1. Section **53A-15-101** is amended to read:

53A-15-101. Higher education courses in the public schools -- Student education plans -- Cooperation between public and higher education -- Annual report.

(1) The State Board of Education in collaboration with the State Board of Regents shall implement:

(a) a curriculum program and delivery system which allows students the option to complete high school graduation requirements and prepares them to meet college admission requirements at the conclusion of the eleventh grade, but does not preclude a student involved in accelerated learning programs from graduating at an earlier time;

(b) a program of selected college credit courses in general and applied technology education which would be made available in cooperation with the State Board of Regents, as resources allow, through concurrent enrollment with one or more of the state's institutions of higher education;

(c) a course of study for a student who decides to continue on through the twelfth grade that would allow the student to take courses necessary to graduate from high school, and at the student's option, to become better prepared for the world of work, or complete selected college

level courses corresponding to the first year of course work at a university, college, or community college in the state system of higher education;

(d) a program for advanced placement which permits students to earn high school credits while qualifying to take advanced placement examinations for college credit; and

(e) a program for the preparation of a student [~~education~~] education-occupation plan by each student at the beginning of the ninth grade which focuses on the student's intent and course of study necessary to complete graduation requirements while participating in one of the programs listed in Subsections (a), (b), (c), and (d). The student [~~education~~] education-occupation plan shall be prepared by the student under the guidance of the student's parent or guardian and school counselor.

(2) The delivery system and curriculum program shall be designed and implemented to take full advantage of the most current available educational technology.

(3) The State Board of Regents shall adopt rules to ensure the following:

(a) early high school graduates who are academically prepared and meet college admission requirements may be enrolled in one of the state's institutions of higher education;

(b) college credit courses are taught in high school concurrent enrollment or advanced placement programs by college or university faculty or public school educators under the following conditions:

(i) public school educators in concurrent enrollment programs must first be approved as adjunct faculty and supervised by a state institution of higher education;

(ii) teaching is done through live classroom instruction or telecommunications; and

(iii) course content, procedures, and teaching materials in concurrent enrollment programs are approved by the appropriate department or program at an institution of higher education in order to ensure quality and comparability with courses offered on college and university campuses; and

(c) college credits obtained under this section shall be accepted for transfer of credit purposes as if they had been obtained at any public institution of higher education within the state system.

(4) College-level courses taught in the high school carry the same credit hour value as when taught on a college or university campus and apply toward graduation on the same basis as courses

taught at an institution of higher education to which the credits are submitted.

(5) The State Board of Education shall provide students in the public schools with the option of accelerating their educational program and graduating at the conclusion of the eleventh grade.

(6) (a) The State Board of Education and State Board of Regents shall work in close cooperation in developing, implementing, and evaluating the program established under this section.

(b) (i) Each high school shall receive its proportional share of concurrent enrollment monies appropriated or allocated pursuant to Section 53A-17a-120 based upon the hours of higher education course work undertaken by students at the school under Subsections (1)(b) and (1)(c) as compared to the state total.

(ii) School districts shall contract with institutions of higher education to provide the higher education services required under this section.

(iii) [~~Tuition~~] (A) Higher education tuition and fees may not be charged for participation in this program, except that each institution within the state's higher education system may charge a one-time per student per institution admissions application fee for concurrent enrollment course credit offered by the institution.

(B) Payment of the fee under Subsection (b)(iii)(A) satisfies the general admissions application fee requirement for a full-time or part-time student at an institution so that no additional admissions application fee may be charged by the institution.

(c) The two boards shall provide the Legislature and the governor with an annual report on the effectiveness of the program with specific focus on the availability and use of counselors in the ninth through eleventh grades to assist students and their parents in designing and implementing effective student education plans.

Section 2. Section **53A-17a-120** is amended to read:

53A-17a-120. Weighted pupil units for accelerated learning programs.

(1) There is appropriated to the State Board of Education an amount of $4,542,824 (2,717 weighted pupil units) for allocation to local school boards for accelerated learning programs in grades one through 12, which include programs for the gifted and talented, concurrent enrollment, and advanced placement.

(2) (a) A school participating in the concurrent enrollment programs offered under Section 53A-15-101 shall receive on a per student basis up to $33.33 per quarter hour or $50 per semester hour for each hour of higher education course work undertaken at the school.

(b) The concurrent enrollment component of the appropriation under Subsection (1) is the revenue source for the Subsection (2)(a) payments.

(c) Beginning July 1, 1996, and for each year thereafter, the amounts specified in Subsection (2)(a) shall be adjusted in proportion to the increase in the value of the weighted pupil unit from the prior year established in Subsection 53A-17a-103(1).

(3) (a) Districts shall spend monies for these programs according to standards established by the State Board of Education in accordance with Title 63, Chapter 46a, Utah Administrative Rulemaking Act.

(b) It is the intent of the Legislature that the State Board of Education develop uniform and consistent policies for school districts to follow in utilizing advanced placement and concurrent enrollment monies.

Section 3. **Effective date.**

This act takes effect on July 1, 1996.

APPENDIX D

PART 1
STANDARDS

53A-15-101. Higher education courses in the public schools - Student education plans - Cooperation between public and higher education - Annual report.

(1) The State Board of Education in collaboration with the State Board of Regents shall implement:

(a) a curriculum program and delivery system which allows students the option to complete high school graduation requirements and prepares them to meet college admission requirements at the conclusion of the eleventh grade, but does not preclude a student involved in accelerated learning programs from graduating at an earlier time;

(b) a program of selected college credit courses in general and applied technology education which would be made available in cooperation with the State Board of Regents, as resources allow, through concurrent enrollment with one or more of the state's institutions of higher education;

(c) a course of study for a student who decides to continue on through the twelfth grade that would allow the student to take courses necessary to graduate from high school, and at the student's option, to become better prepared for the world of work, or complete selected college level courses corresponding to the first year of course work at a university, college, or community college in the state system of higher education;

(d) a program for advanced placement which permits students to earn high school credits while qualifying to take advanced placement examinations for college credit; and

(e) a program for the preparation of a student education plan by each student at the beginning of the ninth grade which focuses on the student's intent and course of study necessary to complete graduation requirements while participating in one of the programs listed in Subsections (a), (b), (c), and (d). The student education plan shall be prepared by the student under the guidance of the student's parent or guardian and school counselor.

(2) The delivery system and curriculum program shall be designed and implemented to take full advantage of the most current available educational technology.

(3) The State Board of Regents shall adopt rules to ensure the following:

(a) early high school graduates who are academically prepared and meet college admission requirements may be enrolled in one of the state's institutions of higher education;

(b) college credit courses are taught in high school concurrent enrollment or advanced placement programs by college or university faculty or public school educators under the following conditions:

(i) public school educators in concurrent enrollment programs must first be approved as adjunct faculty and supervised by a state institution of higher education;

(ii) teaching is done through live classroom instruction or telecommunications; and

(iii) course content, procedures, and teaching materials in concurrent enrollment programs are approved by the appropriate department or program at an institution of higher education in order to ensure quality and comparability with courses offered on college and university campuses; and

(c) college credits obtained under this section shall be accepted for transfer of credit purposes as if they had been obtained at any public institution of higher education within the state system.

(4) College-level courses taught in the high school carry the same credit hour value as when taught on a college or university campus and apply toward graduation on the same basis as courses taught at an institution of higher education to which the credits are submitted.

(5) The State Board of Education shall provide students in the public schools with the option of accelerating their educational program and graduating at the conclusion of the eleventh grade.

(6) (a) The State Board of Education and State Board of Regents shall work in close cooperation in developing, implementing, and evaluating the program established under this section.

(b) (i) Each high school shall receive its proportional share of concurrent enrollment monies appropriated or allocated pursuant to Section 53A-17a-120 based upon the hours of higher education course work undertaken by students at the school under Subsections (1)(b) and (1)(c) as compared to the state total.

(ii) School districts shall contract with institutions of higher education to provide the higher education services required under this section.

(iii) Tuition may not be charged for participation in this program.

(c) The two boards shall provide the Legislature and the governor with an annual report on the effectiveness of the program with specific focus on the availability and use of counselors in the ninth through eleventh grades to assist students and their parents in designing and implementing effective student education plans.

History: C. 1953, 53A-15-101, enacted by L. 1988, ch. 34, § 1; 1989, ch. 2, § 1; 1994, ch. 249, § 1.

Administrative Rules. - This section is implemented by, interpreted by, or cited as authority for the following administrative rule(s): R277-417, R277-703.

Amendment Notes. - The 1994 amendment, effective July 1, 1994, rewrote the introductory language of Subsection (1), which read "Beginning July 1, 1989, the State Board of Education shall implement standards for the public schools to include the following"; rewrote Subsection (1)(b), which read "a twelfth-grade program of selected college credit courses in general education, vocational, and technical education, made available in cooperation with the State Board of Regents, as resources allow, through advanced placement courses or concurrent enrollment with one of the state's institutions of higher education"; added Subsection (1)(d) and Subsection (2); deleted "in the twelfth grade" after "credits obtained" in Subsection (3)(c); in Subsection (6), substituted "developing, implementing, and evaluating" for "developing and implementing the twelfth year component of" in the first sentence, deleted the former second sentence, which read "The Joint Liaison Committee of the two boards shall provide leadership and monitor the program in order to assess and ensure its effectiveness," and added Subsections (6)(b) and (6)(c); and made related and other stylistic changes.

Compiler's Notes. - Laws 1988, ch. 2, § 190 enacted a § 53A-15-101, effective February 2, 1988, which was similar to this section. Pursuant to Laws 1988, ch. 34, § 3, and instruction from the Office of Legislative Research and General Counsel, this section is set out as enacted by Laws 1988, ch. 34.

Cross-References. - State Board of Regents, §§ 53B-1-103, 53B-1-104.

53A-15-102. Early graduation incentives - Incentive to school district - Partial tuition

scholarship for student - Payments.

(1) Any secondary public school student who has completed all required courses or demonstrated mastery of required skills and competencies may, with the approval of the student, the student's parent or guardian, and an authorized local school official, graduate at any time.

(2) Each public high school shall receive an amount equal to 1/2 of the scholarship awarded to each student who graduates from the school at or prior to the conclusion of the eleventh grade, or a proportionately lesser amount for any student who graduates after the conclusion of the eleventh grade but prior to the conclusion of the twelfth grade.

(3) (a) A student who graduates from high school at or prior to the conclusion of the eleventh grade shall receive a centennial scholarship in the lesser amount of full tuition for one year or $1,000 to be used for full time enrollment at a Utah public college, university, community college, applied technology center, or any other institution in the state of Utah, accredited by the Northwest Association of Schools and Colleges that offers postsecondary courses of the student's choice upon verification that the student has registered at the institution during the fiscal year following graduation from high school.

(b) In the case of a student who graduates after the conclusion of the eleventh grade but prior to the conclusion of the twelfth grade, the student shall receive a centennial scholarship of a proportionately lesser amount.

(4) (a) The payments authorized in Subsections (2) and (3)(a) shall be made during the fiscal year that follows the student's graduation.

(b) The payments authorized in Subsection (3)(b) may be made during the fiscal year in which the student graduates or the fiscal year following the student's graduation.

(5) (a) The State Board of Education shall administer the payment program authorized in Subsections (2), (3), and (4).

(b) (i) The Legislature shall make an annual appropriation from the Uniform School Fund to the State Board of Education for the costs associated with the Centennial Scholarship Program based on the projected number of students who will graduate before the conclusion of the twelfth grade in any given year.

(ii) It is understood that the appropriation is offset by the state monies that would otherwise be required and appropriated for these students if they were enrolled in an additional grade for a full year.

History: C. 1953, 53A-15-102, enacted by L. 1989, ch. 173, § 1; 1990, ch. 326, § 1; 1994, ch. 249, § 2; 1995, ch. 96, § 1.

Amendment Notes. - The 1990 amendment, effective April 23, 1990, inserted "any time following" in Subsection (1), and added the language beginning "or a proportionately lesser amount" to the end of Subsection (2) and the language beginning "or, in the case of a student" to the end of the second sentence in Subsection (3).

The 1994 amendment, effective July 1, 1994, inserted "public" and "or demonstrated mastery or required skills and competencies" in Subsection (1); substituted the clause at the beginning of Subsection (2) ending with "the school" for "A school district shall receive an amount equal to 25% of the value of the weighted people unit for each student who graduates from the district"; subdivided Subsection (3); substituted the phrase beginning "centennial scholarship" and ending "applied technology center" for

"partial tuition scholarship to be used at a Utah public college, university, community college, area vocational center" in Subsection (3)(a); rewrote Subsection (3)(b), which read "The scholarship shall be in an amount equal to 25% of the value of the weighted pupil unit, or, in the case of a student who graduates after the conclusion of the eleventh grade but prior to the conclusion of the twelfth grade, a proportionately lesser amount"; deleted "based upon the value of the weighted pupil unit set for the year in which payment is made" at the end of Subsection (4); added Subsection (5); and made stylistic changes.

The 1995 amendment, effective March 10, 1995, added "an authorized," deleted "following the conclusion of the eleventh grade as provided in Section 53A-15-101," and made a stylistic change in Subsection (1); added "or prior to" to Subsections (2) and (3); added the (a) designation in Subsection (4) and added Subsection (4)(b); and deleted "the twelfth" and added "an additional" in Subsection (5)(b)(ii).

APPENDIX F

R165, Concurrent Enrollment

R165-1. Purpose

1.1. High quality - Concurrent enrollment in its various forms should provide high quality college-level academic and
vocational-technical opportunities to qualified high school students. This purpose must take precedence over such issues as economic expediency or acceleration of the high school or college experience.

1.2. Limited applicability - With the implementation of the new Utah core curriculum in the public schools, and increased admission requirements for some of the state's postsecondary institutions, it is not prudent to mandate a curriculum which allows all students to complete high school graduation requirements at the end of the eleventh grade. The 1984
Program of Studies and Graduation Requirements adopted by the State Board of Education contains procedures which permit acquisition of credit that may result in early graduation.

1.3. More challenging twelfth grade - Utah high schools are encouraged to provide a more challenging and useful twelfth grade experience for all students. Concurrent enrollment is intended to assist in this effort as well as provide transition courses to be applied to post-secondary education.

1.4. Qualitative safeguards - It is important that college instruction offered in the high school setting has qualitative safeguards to preserve the rigor and standards of college requirements.

R165-2. References

2.1. 53B-1-103(3), Utah Code Annotated 1953

2.2. 53B-6-103, Utah Code Annotated 1953

2.3. Policy and Procedures 161, Guidelines for Cooperation between the State Board of Regents and State Board of Education: Options for Governance Improvement

2.4. Policy and Procedures 163, Improved Articulation and Coordination between the State Board of Education and the State Board of Regents

R165-3. Definitions

3.1. "Concurrent Enrollment" is enrollment in college courses for credit by high school students who continue to be enrolled as high school students and counted in Average Daily Membership. It exists when college enrollment occurs either pursuant to contractual arrangements between a school district and a public institution of higher education in Utah, or pursuant to individual initiation by the student or students. Higher education reporting mechanisms will provide separate categories for student credit hours generated according to source of direct instructional costs.

3.2. "Contractual Basis". In these cases, the school district and higher education institution negotiate all aspects of the concurrent enrollment situation, including course location, instructor, and funding arrangements. Instruction normally occurs during the school day with students released from regular high school course work to participate in concurrent enrollment. Concurrent enrollment course credits will normally count for completion of high school graduation requirements as well as count as college credits.

3.3. "Non-contractual Basis". In these cases, the student continues to enroll full-time in high

school but elects at his or her own initiative to pursue college course work. The student is responsible for all expenses associated with college enrollment. (Concurrent enrollment is distinct from what is commonly referred to as Early Admission.)

3.4. "Early Admission" is enrollment in college courses for credit by high school students who have left high school prior to graduation and are no longer counted in Average Daily Membership. Concurrent enrollment policies and funding mechanisms do not apply to early admission enrollment. Early admission enrollments are reported as regular enrollments by the higher education institution.

R165-4. Students

4.1. Eligibility requirements - Students wishing to participate in concurrent enrollment should meet eligibility requirements which are sufficiently selective to predict a successful experience and provide college-level competition within the classroom. These requirements may include, among others:

4.1.1. senior standing;

4.1.2. a grade point average and A.C.T. composite score which predict success (generally considered to be a B average and score of 22 or higher);

4.1.3. supportive letters of recommendation; and

4.1.4. approval of high school officials.

4.2. Vocational-technical programs - Students interested in vocational-technical concurrent enrollment should be enrolled according to eligibility requirements determined jointly by the public schools and postsecondary institutions.

4.3. Permanent college transcript - Participation in concurrent enrollment begins a student's college experience and a permanent college transcript. In contrast to the Advanced Placement program, where college credit is granted upon successful completion of a national examination (and no record is kept on the student's college transcript if the exam is not passed), registration for concurrent enrollment constitutes a commitment to enter the final course grade on the student's permanent college record, regardless of the results. Further, credit is earned by performance and participation throughout the class, rather than by an exit examination alone. It is important, therefore, that students receive thorough counseling regarding special curricular options such as concurrent enrollment and Advanced Placement as they develop their educational plans.

4.4. Credit hours earned - Students will be permitted to earn up to 45 quarter hours (30 semester hours) of college credits through contractual concurrent enrollment. Credits in excess of 45 must be on a non-contractual basis.

R165-5. Academic considerations

5.1. Location and faculty - Concurrent enrollment courses will be offered at the most appropriate location for the course content, the faculty, and the students involved.

5.1.1. Qualified students residing within commuting distance of a college or university are encouraged to pursue their concurrent enrollment study on the college or university campus. However, this does not preclude high school programs within that area.

5.1.2. Qualified students not residing near a college or university may be provided college instruction in their local high school or other appropriate sites by interactive telecommunication or some other nontraditional delivery method, visiting regular college faculty, or adjunct college faculty (i.e. high school faculty approved by participating colleges or universities).

5.2. Selection of adjunct faculty - Nomination of adjunct faculty is the joint responsibility of the local school district and the participating college or university. Final approval of the adjunct faculty will be determined by the appropriate college or university department. Selection criteria for adjunct faculty teaching concurrent enrollment courses should be the same as those criteria applied to other adjunct faculty appointments in specific departments.

5.3. Faculty development - High school teachers who hold adjunct faculty status with a college or university for the purpose of teaching concurrent enrollment courses should be included as fully as possible in the academic life of the supervising academic department. In-service and professional development activities for faculty are an essential element of concurrent enrollment. Such activities should be a coordinated effort between public and higher education. Universities and colleges will provide in-service training including appropriate workshop experiences prior to offering of
concurrent enrollment courses, on-site monitoring, and continuing education in the content area. Some of these experiences will enable individuals to earn graduate-level credit through participating universities. Whenever possible,
in-service and professional development activities should be coordinated and provided on a statewide basis.

5.4. Courses and instruction - Course registration and the awarding of credit for concurrent enrollment courses are the province of colleges and universities governed by USHE policies for service areas and off-campus programs and courses as contained in the Regents' master plan. Private institutions are not governed by geographic locations but are encouraged to consult with USHE institutions when sponsoring off-campus concurrent enrollment programs.

5.5. Core curriculum - In general, concurrent enrollment offerings (other than vocational/technical) should be limited to a manageable number of courses in fine arts, humanities, science, and social science, allowing a focus of energy and resources on quality instruction in these courses. The number of courses will be kept small enough to assure coordinated statewide development and training activities for participating teachers and transferability of credit from institution to institution.

5.5.1. The courses chosen should provide introductory-level course work for a variety of majors and allow students to satisfy some general education requirements at the state's colleges and universities. There may be a greater variety of courses in the vocational/technical area.

5.5.2. Courses selected should reflect the strengths and resources of the respective schools and colleges and universities and be based on student needs. Course content, procedures, examinations, teaching materials, and program monitoring are the responsibility of the appropriate higher education program or department in order to ensure quality and comparability with courses offered on the college and university campus.

5.5.3. Course selection criteria and the specific course subject list will be developed by the Concurrent Enrollment Committee described in section 6.

5.6. Advanced placement - It is not the intent of the concurrent enrollment program to compete with or displace the Advanced Placement program. Indeed, there currently are examples of these two programs operating compatibly in the same school.

R165-6. Concurrent Enrollment Coordinating Committee

6.1. Committee membership - The Liaison Committee of the State Board of Education and the State Board of Regents shall recommend to the two governing boards the appointment of a Concurrent Enrollment Coordinating Committee
composed of an equal number of faculty and administrators from both the public schools and institutions of higher education to coordinate concurrent enrollment activities.

6.2. Committee responsibilities - The committee shall:

6.2.1. develop a list of approved courses for concurrent enrollment;

6.2.2. advise the two governing boards regarding in-service training and professional development programs; and

6.2.3. oversee the research and evaluation of concurrent enrollment practices in Utah. Research studies should be designed to assess student selection procedures, student success and rate of progress, quality of instruction and academic preparation of instructors, and relative costs and benefits of concurrent enrollment programs.

R165-7. Funding

7.1. Source of funds - A portion of the State funds appropriated for accelerated learning programs shall be allocated to concurrent enrollment programs. Each district shall receive a pro-rated amount according to the number of quarter hours of successful college credit earned by students in that district.

7.2. Funds flow - Appropriated funds should flow to the districts and from there to the colleges or universities according to the level of costs borne by each as determined by the contractual agreement.

7.3. Shared costs - Some portion of program costs will be borne by each of the participating parties: the school district, the higher education institution, and the student.

7.4. Annual contracts - Collaborating school districts and colleges will negotiate annual contracts for administrative and instructional support of concurrent enrollment courses. The contracts should include the course outlines, texts, and other materials needed, and should specify the administrative and supervisory services, including in-service education and reporting mechanisms, to be provided by each party to the contract.

7.5. Tuition charges - Colleges and universities which contract to offer concurrent enrollment programs may arrange to waive the negotiated tuition fee for up to 10% of students in concurrent enrollment who are financially in need (as determined by high school officials), and school districts may set aside an appropriate amount of money to provide textbooks and other instructional materials for such students.

(Approved January 22, 1988)

APPENDIX G

Application for the Use of Human Subjects in Research Part A

Title of Study:	Cost Savings Through Concurrent Enrollment: An Analysis of The Costs And Savings To Students And The State of Utah Through Salt Lake Community College's Concurrent Enrollment Program
Principal Investigator:	Larry A. Kruger, doctoral student, Educational Leadership and Foundations (Name, Title, Department)
Co-Investigator(s):	None (Name, Title, Department)
Full Address (+ Zip):	12187 River Vista Drive Riverton, Utah 84065
Phone Number:	(801) 253-3141 (home) (801) 957-4120 (work) Date: Aug 24, 1999
This research is originated by:	____ Faculty ____ Staff X Student ____ Thesis X Dissertation ____ Course Project ____ Other

Signatures: (Student Research must include the name of the Committee Chair/Faculty Sponsor)

Committee Chair/Faculty Sponsor: Dr. John D. Willardson

Thesis/Dissertation — Date of approval by the Proposal Review Committee: August 13, 1999

Assurance Document, Part B

The attached investigation involves the use of human subjects. I understand the university's policy involving human subjects and I agree:

1. To obtain voluntary and informed consent of subjects who are to participate in this project.
2. To report to the IRB any unanticipated effects on subjects which become apparent during the course of, or as a result of, the experimentation and the actions taken.
3. To cooperate with members of the committee charged with the continuing review of this project.
4. To obtain prior approval from the committee before amending or altering the scope of the project or implementing changes in the approved consent form.
5. To maintain documentation of consent forms and progress reports as required by institutional policy.
6. To safeguard the confidentiality of research subjects and the data collected, when the approved level of research requires it.

Even though human subjects are not being used in the study, I agree to the conditions as they may apply.

Larry A. Kruger — Signature of Principal Investigator

9-9-99 — Date

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Your project and consent document have been reviewed and approved as:

____ High Risk ____ Moderate Risk _/_ Minimal Risk

Your approval is dependent upon your making the following modifications in the research project:

____ No modifications ____ Consent form ____ Subject selection

____ See attached page for details

By the David O McKay School of Education Research Committee

10/28/99
Date Approved

K. Richard Young
K. Richard Young, Associate Dean over Research

Continuing Review Scheduled for _____

Human Participant Protocol Review
Part C

Title of Study: Cost Savings Through Concurrent Enrollment: An Analysis of The Costs And Savings To Students And The State of Utah Through Salt Lake Community College's Concurrent Enrollment Program

Principal Investigator: Larry A. Kruger

Duration of Study: The study will include **summarized** data obtained from Salt Lake Community College's Student Information System about students who graduated from Salt Lake Community College during the 1997-1998 academic year.

In this a multi-center study? _____ Yes __X__ No

Will you be seeking external funding for your research? _____ Yes __X__ No

Does this study involve participants located outside the United States? _____ Yes __X__ No

Does this study involve participants who are not fluent in English? _____ Yes __X__ No

Number of subjects: Number of 1997-1998 graduates who completed concurrent enrollment courses is not known at this time. This will depend how many 1997-1998 Salt Lake Community College graduates successfully completed concurrent enrollment courses. However, no data which identifies specific individual students will be reported in this study.

Gender of subjects: Both male and female students are included in the data to be studied. However, no information about gender will be included.

Ages of subjects: Age of students whose data will be included in the study is not know. However, subjects will be old enough to have completed an Associate of Science or Associate of Applied Science degree at Salt Lake Community College. All subjects should be at least 18 years old.

Vulnerability of subjects:

Are participants younger than 18 years of age? _____ Yes __X__ No

Are the participants pregnant women? Unknown

Information from Salt Lake Community College's student information system is to be used in the study. This information will include all students who graduated during the 1997-1998 academic year and who successfully completed at least one concurrent enrollment course. Personal information about students will not be included in the study nor known.

Are the participants prisoners? _____ Yes __X__ No

Are the participants institutionalized? _____ Yes __X__ No

Are the participants cognitively impaired? _____ Yes __X__ No

Is this research: _____ Therapeutic? __X__ Non-therapeutic?

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Consent Form

1. This study is intended to determine the extent of time- and cost-savings to students attending Salt Lake Community College who successfully complete concurrent enrollment courses through Salt Lake Community College, to determine the extent of cost-savings to the State of Utah, and to present relevant findings. **Summarized** data obtained from Salt Lake Community College's Student Information System about students who graduated from Salt Lake Community College during the 1997-1998 academic year will be used to calculate these costs or savings.

2. No reasonably foreseeable risks or discomforts exist.

3. As the student population continues to increase, more pressure is placed on higher education institutions and the State of Utah to provide cost-effective programs which allow students to complete efficiently their higher education experience. Since the purpose of this study is to focus on time- and cost-savings to students and cost-savings to the State of Utah, information resulting from this study will be of interest to State Legislators and legislative analysts; college administrators, faculty and staff; school district administrators; and high school administrators and faculty. This study is significant in that it will provide funding information about the concurrent enrollment program which previously has not been available.

4. Data acquired from Salt Lake Community College's Student Information System will be summarized and any reference to individual students removed. Data obtained from the computer system will not be provided to any other individual or entity and only summarized data will be reported.

5. Since the research involves no more than minimal risk, no compensation will be available and treatment if injury occurs is not needed.

6. Any questions about the research can be directed to Larry A. Kruger, Salt Lake Community College, 4600 South Redwood Road, Salt Lake City, Utah, 84130; phone 801/957-4120.

7. Any questions about the rights of participants in this research project can be addressed to Dr. Larry E. Wood, Chair of the Institutional Review Board, 1122 SWKT, Brigham Young University, Provo, Utah, 84602; phone 801/378-3405.

8. The use of data from Salt Lake Community College's Student Information System is not coerced, and is granted by the College's Registrar.

9. I have read, understood, and received a copy of the above consent, and grant permission for data from Salt Lake Community College's Student Information System to be used in this study.

Registrar, Salt Lake Community College — Date: 11-2-99